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LECTURES.

*ON INFECTIOUS DYSPEPSIA AND ITS RATIONAL TREATMENT BY THE ANTISEPTIC METHOD.**

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A CYNICAL Frenchman declared that the treatment of consumption was "opium and lies;" and at times we are tempted to say that the treatment of dyspepsia is the same—minus the opium. If we confine our judgment to the numerous proprietary "sure cures for dyspepsia" now so widely advertised, this conclusion would probably be nearly correct. I hope, however, that the methods of rational medicine may so commend themselves to our favor as to escape condemnation to this category, especially when we may see our patients, by adopting them, cured safely, quickly and more or less pleasantly.

It is proper to state, at the outset, that our present consideration of the subject is limited to dyspepsia solely as related to the stomach; no reference is attempted, or intended, to be made to intestinal indigestion, or to the so-called intestinal dyspepsia.

It must be very obvious to all that dyspepsia occupies a very important place in popular nosology; it is as familiar as household words. On the contrary, there is a strong disposition among many of our systematic writers on medicine to ignore the term dyspepsia, or simply to discuss it as a synonym of indigestion. This may be due to the fact that the pathology of the disease, which Trousseau called a subject "vast and obscure," has hitherto been very little understood: on the principle that the proper way to treat a disease which we do not understand is to treat it with contempt. Most of our text-books disappoint the anxious inquirer by paying very little attention to dyspepsia, or merely mentioning it as a symptom, or as synonymous with gastric catarrh or simple indigestion. Some authorities—Clifford Allbutt, for example—are skeptical of its very existence, and darkly hint that it serves as a convenient cloak for a host of sins of omission in the way of overlooked diagnosis of organic disease. I am willing to admit that many cases of gastric inflammation, gastric ulcer, even gastric cancer, may remain for a long time latent, or merely occasion some disturbance of digestion; but this only illustrates the well-known difficulty of diagnosis of disease affecting the viscera, and certainly is no proof that indigestion or dyspepsia may not exist where no organic affection is present. Time clears up the diagnosis of most stomach disorders, just as it does those of supposed ovarian cysts or of some uterine fibroids in young persons of appropriate sex.

It is true that indigestion, or laborious, slow and painful digestion, may be only a symptom; but, when this symptom is of constant recurrence, and seriously impairs the patient's capacity for work or his enjoyment of the amenities of life and effectually destroys his comfort and ease, substituting discomfort therefor, it is hard to convince him that it is not fully deserving of the title of disease,—by

* Read by invitation before the Mississippi Valley Medical Association at its Sixteenth Annual Meeting, Louisville, Ky., October 8, 1890.

brevet, at least. Does it not seem that habitual indigestion and suffering after partaking of food, in an individual, is, at least, something very much akin to disease? One of the Hippocratic aphorisms reads as follows: "Such constitutions as suffer quickly and strongly from errors in diet are weaker than others that do not; and a weak person is in a state very nearly approaching one in disease." Here is a definition of a dyspeptic, 2300 years old: *one with a weak constitution, who suffers quickly and strongly from errors in diet.* Unfortunately, the poor dyspeptic is surrounded by pitfalls which he only discovers by tumbling into them; he is forever finding out that he has committed errors in diet, and is eternally encountering new trials and committing more errors, until he is ready to exclaim, in his extremity: "O wretched man that I am! Who shall deliver me from the body of this death?" It is a fact, and a very sad one, by no means unfamiliar to readers of the daily press, that the condition of the dyspeptic sometimes becomes so intolerable that his mind becomes unbalanced, and he seeks surcease from sorrow and suffering by suicide. Let no man judge him harshly for the dreadful deed:—

> "The wrong that's done we may compute,
> We know not what's resisted."

With reference to the pathology of dyspepsia, I would consider it at least as much entitled to recognition as a distinct disease, in the present unsettled condition of medical nomenclature, as consumption or chorea. Like them, it is characterized clinically by manifestations of nervous disorder; so that Cullen was not very far wrong in considering dyspepsia as a neurosis under the class Adynamiæ. Like pulmonary phthisis, also, its most marked symptoms are produced (I believe) by the absorption of the products of parasitic micro-organisms. Just as Philip has shown that the symptoms of phthisis are due to the absorption of toxic products of bacilli tuberculosis, I think that many of the clinical manifestations of dyspepsia are caused by poisoning by ptomaines or leucomaines. For when bacteria and other micro organisms have been accidentally swallowed with the food, if they find the conditions favorable in the stomach, they will rapidly multiply there and make it a centre of infection. When this occurs, and symptoms of disorder appear, I think it permissible to follow the general rule and apply to it the term infectious dyspepsia. By this I do not imply that it is also contagious, in the ordinary sense, but merely that the morbid manifestations are directly connected with infection by micro-organisms and their products.

Lauder Brunton has gone over this ground in his papers on "Indigestion as a Cause of Nervous Depression," and on "Poisons Formed from Food, and their Relation to Biliousness and Diarrhœa;" and Sir Andrew Clark has similarly traced the cause of anæmia and chlorosis in young girls to digestive disturbance, or what he terms fæcal intoxication. We now accept, without reservation, Pasteur's demonstration that there can be no fermentation or putrefaction without the presence of micro organisms; and I think Lister's corollary, that they are also responsible for the occurrence in the living body of inflammation and suppuration, is also generally received and daily acted upon,—at least, by those of us who practice surgery. Therefore, when Abernethy bluntly said that "men eat so much that the food actually ferments in their stomachs," he went at once to the root of the matter, and indicated the true cause of the symptoms in many cases of dyspepsia. Leared has shown that heart-burn is due to the presence in the stomach of butyric acid,—a product of lactic fermentation; and nearly thirty years ago Milne Edwards declared, as the result of his study of acid dyspepsia, that "the phenomena of lactic and butyric fermentation, which are manifested in the digestive tube, may well depend upon the action of infusoria, which live and multiply in the interior of this canal,—a hypothesis which explains the production of two gases found here, viz., hydrogen and carbonic acid."

Of late years the science of bacteriology has made wonderful advance, and especially in the department of bacterial parasitism, or infection, and its relation to disease. It is known that certain micro-organisms, under ordinary circumstances, are harmless to the human system; others possess virulence, and produce more or less disturbance of the bodily functions, or give rise to the different varieties of specific diseases. Under normal conditions, microbes, principally harmless, constantly find their way into the air-passages and into the stomach, and, indeed, certain varieties are always found flourishing among the contents of this organ.

Abelous,* a recent investigator of this subject, found 16 species existing normally in his own stomach, of which 2 were micrococci, 13 bacilli, and 1 vibrio. (Of these the sarcina ventriculi, the bacillus pyocyaneus, bacterium lactis aërogenes, bacillus subtilis, bacillus amylobacter, bacillus megabacterium, and vibrio rugula had been recognized previously by other experimenters.) The presence of saprogenic microbes in the stomach, therefore, being constant and not incompatible with health, it becomes necessary to inquire why fermentation or putrefaction of the food does not occur after every meal? In other words, how is practical antisepsis obtained by natural process? Three things are to be considered in this connection,—(1) the food, (2) the digestive fluids, and (3) the physical conditions attending the act of digestion. With regard to the food, we observe that effort is made to have it fresh and suitable for digestion; experience has shown that tainted food, or, as we commonly say, spoiled food, very promptly causes serious disorder, both of the digestive organs and the nervous system. The food is also, as a rule, required to be mainly of the kind that the individual is accustomed to eating, as unaccustomed food often produces sickness. The well-known antiseptic character of the digestive fluids is of great utility in preventing the development of micro-organisms, but they vary, both in their quantity and quality, under morbid conditions. The muscular contractions of the stomach, owing to deficient innervation, or to other causes, are often lacking in energy and efficiency, thus producing what has been called motor dyspepsia, and the movements may also be attended by pain.

With regard to the personal equation or digestive capacity of different individuals, we rarely give sufficient consideration in therapeutics to actual anatomical differences in stomachs. Some persons have stomachs many times larger than others, thus requiring more bulky food and less frequent feeding than the latter, and this difference exists even early in infancy.

As already stated, during healthy digestion fermentation and putrefaction of the food do not occur; but let digestion be retarded, or let the supply of gastric juice be insufficient in quantity or deficient in its essential elements, or let certain germs be present in unusual quantity, and indigestion, sour stomach, and the usual symptoms attending painful and tardy digestion will be produced. On the contrary, in a case of habitual indigestion, or dyspepsia, if proper measures be taken to keep the pernicious activity of the micro-organisms in check, at the same time securing by hygienic and tonic treatment a proper innervation of the stomach, and especially a sufficient supply of gastric juice of good quality, the nervous symptoms, both local and systemic, will at once be ameliorated, and by continuing this plan of treatment (which I have ventured to call the antiseptic method on account of its results), and the selection of a proper dietary, the dyspeptic may be restored, if not to perfect health and happiness, at least as near as he can hope to come to them in this world.

I cannot help digressing a little just here, to note the precautions which civilized man has been taught by experience to take, in order to prevent septic infection of the contents of his stomach. He cooks his food at a comparatively high temperature, and, generally, it is eaten at once, or means are taken to preserve it by refrigeration or hermetical sealing. In thickly-inhabited parts of the world it is the custom to boil the water used for drinking purposes, and, very commonly, some aromatic or slightly stimulating herb or berry is added to make it more palatable. In fact, coffee after roasting has also decided antiseptic effects, and its infusion markedly retards the development of micro-organisms in the stomach. Tea exerts a similar action, though to a less degree, but it has the disadvantage of retarding the digestion of albuminoids. Chloride of sodium is a constant feature upon all of our tables, and, doubtless, is one of the great agents in permitting advance in civilization, as it helps digestion, and is a valuable antiseptic. Alcohol has this action also, but possesses the additional advantage of stimulating the nerves of the stomach, thus increasing the rate of its movements, and also the amount of the gastric juice. When used to assist digestion, alcoholic stimulants are considered by Ringer to be invaluable, when used medicinally and with discretion. In the treatment of weak digestion, I often find the judicious use of old Bourbon to be attended by the most happy effects. It is the most reliable form in which to administer stimulants, and is infinitely preferable to adulterated French wines for this purpose.

* Recherches sur les Microbes de l'Estomac à l'Etat Normal et leur Action sur les Substances Alimentaires. Paris, 1889.

It might be mentioned here, with regard to the question of treatment, that many of the drugs of established reputation in relieving the symptoms of dyspepsia are also known to be antizymotics. For instance, we may enumerate the cinchona salts (quinine is very prominent among bactericidal agents), hydrochloric acid, nitrate of silver, the volatile oils, strychnine, arsenic, the mercurials, iodine and carbolic acid, creasote, beta-naphthol, salicylic acid, salol, resorcin, charcoal, not forgetting alcohol, which is the basis and essential ingredient in the various elixirs, tinctures and bitters. The alkalies, particularly the bicarbonate of sodium, act indirectly as antiseptics, by changing the reaction of the fluid contents of the stomach and preventing the growth of those bacteria which flourish only in an acid medium.

A very prompt and efficient method of preventing the undue development of micro-organisms in the stomach is by irrigation of its cavity with antiseptic solutions. Washing out the stomach, or lavage, is a very old method of relieving the symptoms of indigestion, and does not require special apparatus for its performance. All that is necessary is to swallow large quantities of water, or other detergent solution, and then make the stomach empty itself by the act of vomiting. This was in use among the ancient Romans, and probably is among the few therapeutic expedients coming down to us from primeval man. The treatment of dyspepsia by emetics is similar to it, though attended by more nausea and disturbance of the general system. The method, which Kussmaul introduced in 1867, is a great improvement upon either of these. He uses a soft œsophageal tube, attached to a stomach-pump, for the purpose of washing out the stomach, and surprising results are obtainable by adopting this treatment. I have used for the same purpose a long tube, to which a funnel is attached, with equally good results, in adults, the tube being introduced through the œsophagus until its extremity enters the stomach. The funnel is then held upright, and a pint or more of fluid poured through it into the stomach; by simply allowing the funnel to hang down the action is reversed, and the stomach is emptied by siphonage. This is repeated several times at each sitting, or until the water returns clear. This plan answers very well in adults, but the pump or aspirator is better for children. I do not wish to give a bibliography of this subject, but will simply refer to a recent paper (Johns-Hopkins Hospital Bulletin for July, 1890) by my friend Dr. William H. Booker, of Baltimore, in which the results of nearly 200 cases of gastro-intestinal disturbance in children treated by stomach-washing are given. He reports remarkably successful results, especially for the relief of vomiting due to indigestion, and in summer complaint. I could give some interesting cases occurring in my own practice among adults with confirmed dyspepsia (one of incipient insanity apparently arrested by washing out the stomach a few times, and appropriate general treatment), but I do not wish to extend this communication farther.

I would summarize as follows:—

Laborious, painful, and imperfect digestion occurring habitually, when not symptomatic of other disease, constitutes dyspepsia; and when accompanied by fermentation of the contents of the stomach and general toxic symptoms, the result of microbian development, it may properly be called infectious dyspepsia

The disorder is sufficiently prevalent, and gives rise to enough discomfort and actual suffering in its victims not only to deserve our serious consideration, but also to enlist our best therapeutic skill in their behalf. The excessive growth of micro-organisms during digestion is favored by slow movements of the stomach and by defective quantity or quality of the gastric juice. Acid dyspepsia, or sour stomach, may be due to excessive secretion of hydrochloric acid (rarely), but is generally caused by lactic, acetic, or butyric fermentation, due to the presence of appropriate forms of bacteria in the stomach. The object of treatment of infectious dyspepsia is to prevent the excessive development of micro-organisms during the digestion of food. This is sought to be accomplished by (1) the use of articles of diet which are not in a fermenting condition nor readily fermentible; (2) by adopting such hygienic and tonic measures as will invigorate the bodily powers and especially bring the gastric juice up to its normal standard of quality and quantity, and increase the muscular power of the stomach; and (3) by local antiseptic treatment, including the administration of drugs which retard fermentation, and especially by lavage, or irrigation of the stomach, with weak disinfectant solutions, or simply recently-boiled water.

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ON MORVAN'S DISEASE.*

By PROF. J. M. CHARCOT.

(Concluded from October number.)

UPON what anatomical alterations does Morvan's disease depend? Some, as Monod and Reboul and Gombault, believe that it is due to a peripheral neuritis. This neuritis does not, however, appear to be isolated, peripheral in the common acceptation of the term. It would rather seem to be subordinate to a spinal lesion.

This is the opinion of M. Morvan, who thinks that the focus of the disease is located in that portion of the spinal cord from which the brachial nerves originate. What are the parts involved? The gray matter of the anterior horns, and likewise the lateral fasciculi, because there is paralysis with atrophy; the posterior horns and posterior fasciculi, since there is total anæsthesia. The trophic centres of the cord—that is, the median part, and perhaps the middle horn—seem also invaded.

Whatever may be the site and nature of these lesions, still imperfectly known, one thing is certain: that the single autopsy of Morvan's disease which we possess has not revealed the existence of any of those intra-medullary cavities characteristic of syringomyelia. There was only found a sclerotic myelitis of the posterior horns, posterior fasciculi, and the central parts of the cord. In these conditions the peripheral neuritis is a secondary fact, as are the concomitant trophic derangements, in the perpetuation of which, when once they are established, no doubt the neuritis assists. No evidence has been offered, it may be said in passing, that Morvan's disease is of an infectious nature, or caused by the presence of micro-organisms.

The existence of atypical cases, of which I shall, perhaps, have some future occasion to speak, tends to prove that the lesion of the central, trophic district of the cord is the essential feature of the malady. The paresis and analgesia appear to be accessory, and Morvan's disease should be considered, above all, as its discoverer maintains, a trophic disorder.

You are now in a position, gentlemen, to take part in the study of the patiént, whom we owe to the courtesy of M. Hanot, and who is a classical example of Morvan's disease, with, nevertheless, some peculiarities which, as you shall see, constitute the case, not, indeed, an abnormal, but rather a complicated one.

The patient, John C., is a carter 56 years of age. His family history reveals nothing of importance. His father was healthy, and died of old age in his ninety-seventh year. His mother died in childbed at the age of 46. As he left his family at the early age of 9, his account is necessarily very imperfect. He only knows that his paternal grandfather lived to be very old, and has little knowledge of his collateral ancestors on either side. He is unmarried, and has no children. His antecedent personal history contains nothing of consequence. He does not remember having any illness as a child, or after he was grown. He denies syphilis or intemperate habits.

Six years ago he was at Pont-St.-Esprit, where he worked at the construction of a dyke upon the Rhone. He had to unload his cart-full of earth down a slope into the river. One day, when arranging his cart, the ground slipped beneath his feet, and he fell into the Rhone, where he remained some instants with his head under water, his legs being caught in the earth which fell with him. He was rescued, and, after having vomited a good deal, resumed his work, and finished the day. He did not lose consciousness, but when he went home in the evening he had a chill. On the following day the physician of the local hospital admitted him to that institution, where he remained five months suffering, according to his account, from typhoid fever. It is certain that he had a severe illness, attended by fever, for he is aware that he lay in bed delirious for seventeen days.

Already, when he left the hospital in order to seek work at Paris, his left arm felt benumbed, and he had prickling sensations, especially in the hand. Nothing more appeared during four years. During this period he continued to work as a carter on embankments, and noticed in shoveling earth that his left hand was weaker than the right. At the same time, also, the arm, the right side of the trunk, and the right half of the face were the seat of a much more abundant perspiration than the opposite side. No symptoms appeared in the legs.

Four years from the beginning, in July, 1886, he perceived that the prickling increased. Soon afterward the thumb began to swell, and,

* Delivered at the Hospice de la Salpêtrière, December 6, 1889. From Le Progrès Médical, Mar. 15 and Mar. 22, 1890.

suppuration taking place, he opened it with his pen-knife. After a little while, in September, 1886, the palm of the hand became swollen, and "something which looked like a broken-open callus" formed. The pus penetrated the sheaths of the tendons. In November of the same year he had 2 new whitlows, making 3 in number, 1 upon the middle and the other upon the ring finger, and the hand remained sore for eight months. By the time that it healed—the patient consulted no one, and attended to the hand himself—the terminal half of the last phalanx of the middle finger and a good part of that of the thumb had disappeared. The first of these whitlows was accompanied by excessive pain, which prevented the man from sleeping and caused him to walk the floor whole nights. The second was much less painful, and the third caused no suffering at all. Pieces of bone were several times removed by the patient himself when he changed the dressings, which invariably consisted of flax-seed poultices. He also treated the hand with prolonged baths in a marsh-mallow decoction.

When the whitlows were healed the patient found that he had no power in his arm or hand. Having come to the end of his resources, he decided to enter the Hôpital St.-Antoine, into which he was admitted in the service of M. Hanot. During his stay there were observed the distortions which I shall describe: the absence of the nails, which had fallen from the thumb, the middle and ring fingers; painless fissures; atrophy of the thenar and hypothenar eminences; paresis, and complete analgesia of the arm and forearm. This information is drawn from the observation published by M. Hanot in the Archives générales de médecine. The patient had already noticed the anæsthesia of the left forearm and hand, from the fact that not the least pain attended the fissures which during the winter had formed, bled, and ulcerated. This came to pass after the evolution and cure of the whitlows. During his first sojourn he received electrical treatment and some internal medication.

Since leaving the hospital of Pont-St.-Esprit the patient had been subject to buzzing in the left ear, accompanied by an almost continuous vertigo, even at night, when he lay awake in bed. This vertigo has never caused him to fall. But he states that sometimes, especially of late, he is obliged to lay hold of something for fear of falling. He had not at that time, nor has he now, any gross lesion of the ear, discharge, etc. An otological examination by M. Gellé shows that he suffers from Ménière's vertigo, with aural lesions which appear to have no relation to the affection which is the subject of this lecture.

He left the hospital in June, 1888, and endeavored to work again. But he was not able to continue, although he persisted for five months in the attempt, on account of the weakness of his left arm. He had not strength enough to harness or unharness his horse, and was obliged to pay a man to do this work for him.

After a certain respite he was again forced to enter the hospital under the care of M. Hanot (1888). No new development has since occurred, except that the left leg has begun to fail in strength, which causes him to walk with difficulty. He has remained in hospital ever since, with the exception of a two months' interval, during which time he tried to earn his living as a hackney coachman. But when seated on the box the buzzing in the ear and the vertigo were so troublesome that he was obliged to give up the attempt. The results of the examination of M. Hanot in 1888 are preserved in the thesis of M. d'Oger de Spéville upon Morvan's disease. They are identical with those which I obtained in 1889, except that there then existed in the digito-palmar folds of the thumb, middle and ring fingers of the left hand, and also to some extent upon the right hand, painless fissures in course of evolution. No trace of these is present to-day.

Present Condition.—That which first attracts attention in seeing this man walk is the position which he assumes and his gait. He advances with back slightly bent; the head inclined toward the left shoulder by the action of the left sterno-mastoid; arms hanging by the side, but shaken from time to time, especially upon the right side, by choreiform spasms, slight in extent, but nevertheless readily perceptible. There is no well-marked disorder in the position or movements of the legs. The right arm is not agitated during walking, but hangs as if lifeless. The fingers are bent, and hide the thumb, which is buried in the palm of the hand.

The position of the head is well marked, even in complete repose; it is caused by the buzzing in the left ear and the vertigo. Force

is absolutely lost in the left hand, while if not great in the right it is still preserved. The dynamometer records right hand = 40; left hand = 0.

It is certainly diminished as well in the right forearm and left shoulder, though not reduced to zero. Besides, it is easy to see that the man exaggerates a little the weakness of that member. The patellar reflex is diminished, but present.

The position of the hand in repose is the same as I have just described it in walking. The index and the little finger only are free from all lesion, except a certain degree of retraction of the flexor tendon. The thumb has lost half of its last phalanx, but a portion of skin remains adherent to the nail, which gives to the end of this digit a peculiar, claw-like appearance. The medius is shortened and somewhat spindle-shaped, the lower half of its last phalanx is lacking, while the nail is represented by a small piece placed flatwise upon the summit of the stump. The skin has lost its folds and lines, and is not adherent to the deep tissues. It is the same with the skin of the ring finger, in which the retraction of the flexor tendon is still more considerable. Also, its last phalanx, the extremity of which is gone, is subluxated backward upon the middle phalanx. Strangely enough, the skin of the little finger, which had never suffered from whitlow, is as destitute of lines and folds as the middle or ring finger.

There is a certain degree of apparent diminution in the length of the fingers of the left hand compared with those of the right. But it is necessary to remark that the patient, having had a whitlow of the tendons, serious alterations have been produced in the deep tissues of the hand. Nevertheless, by comparing the index fingers, which have not been attacked by whitlow, it is evident that there is an actual difference in length. Upon the palmar surface the distance which separates the first from the third and last digital fold is different in the right and left (4 centimetres in the left and 4¾ centimetres in the right). This comparison could not be made with the little fingers, because of the considerable retraction of the flexor tendon, nor with the other fingers by reason of their deformities.

There is complete and absolute left hemianæsthesia for contact, pricking, heat and cold, with loss of muscular sense in the hand.

Examination of the eyes by M. Parinaud, September 20, 1889, gave the following results: left eye, the seat of hysterical manifestation; binocular vision recovered by the prism (diplopia by the aid of a prism placed before the right, healthy eye). Right eye healthy. Nothing in the fundus. At a second examination the recovery of binocular vision by the prism was not reproduced.

Examination of the hearing loses its importance, in a manner, on account of the aural sclerosis and Ménière's vertigo.

Taste is absolutely lost upon the left half of the tongue, and certainly blunted upon the right.

The sense of smell is absolutely lost upon the left side. It exists on the right side, though it is not very acute.

The patient has no pain, except from a severe and nearly constant headache. There are no hyperæsthetic points; no hysterogenetic zones (testicle, pseudo-ovarian, etc.). He has never had nervous crises. To the naked eye there is in no portion of the body evidence of muscular atrophy. The forearms are of equal measure, and the same is the case with the arms, thighs, and legs. The patient is of good, muscular development, though not an athlete.

The electrical reactions of the muscles of the hand, which alone appear atrophied, are normal and identical upon the two sides, though partly masked by the enormous resistance offered by the thickness and hardness of the integument.

There is no deformity of the vertebral column; not the least scoliosis. The patient is, as I have said, a little bowed, and when he is stark naked his left shoulder is seen to be a little higher than the right. This is the result of the position in which he holds his head, which is drawn to the left side, while at the same time his shoulder is raised.

The appetite is fairly good, and the general condition not bad. Sleep is continually troubled with nightmares, always of the same kind (falling down precipices).

The patient recognizes that he is much changed in character since his accident at Pont-St.-Esprit, and the consecutive development, first of buzzing in the ear, then of whitlows, and the loss of power in the left arm. Formerly he was always cheerful and ready to sing; now he has become sad and morose.

Otherwise there is nothing particular to note in his mental condition.

You now know the patient, gentlemen. You see that when he first came under the observation of M. Hanot he presented an excellent type of Morvan's disease, such as I have described it to you in the beginning of this lecture.

But, you will say, what is the meaning of this complete hemianæsthesia, and especially these sensorial anæsthesias, which have no part in the clinical picture of analgesic paresis with whitlow? Here, in fact, gentlemen, the theory of a medullary lesion is not enough. A cerebral lesion is required in order to explain all the facts. Have we here a lesion of the sensitive crossway of the internal capsule as an absolutely accidental complication? Nothing in the history of the patient authorizes us to admit such a hypothesis. Besides, sensitivo-sensorial hemianæsthesia of capsular origin is rarely so profound and complete as in the present case.

It is in hysteria alone, gentlemen, that such a complex of symptoms can be encountered in the same degree of intensity. By this theory everything is easily explained, if we admit the entirely probable fact that in our patient hysteria is superadded to Morvan's disease.

At what time has this complication supervened? Probably when, the whitlows cured, the patient saw himself, by his persistent deformities, rendered incapable of definite occupation. To the profound trouble occasioned by his disease was added the mortification of being unable to maintain his independence. Then it was that hysterical anæsthesia made its appearance, superimposing itself upon the limited anæsthesia of Morvan's disease, and when, for the second time, the man came under the care of M. Hanot, that gentleman was able to demonstate the presence of the hysterical stigma. It is, however, at present a hysteria without hysterogenetic zones or attacks. Yet we have no assurance that these will not some day develop.

The prognosis, as well as the treatment, requires to be based upon two entirely distinct considerations. On the one hand, hysteria is, to a certain point, susceptible of amelioration. We may employ against it hydrotherapy, static electricity, magnetism, etc. On the other hand, in regard to Morvan's disease, we are disarmed. We are not able to say that it may be cured, and we do not know that we are able to prevent it from reviving and attacking the opposite side, until now almost intact. We shall make use of revulsives over the spine, iodide and bromide of potassium, the ergot of rye, perhaps, and all the drugs which we may suppose to have a favorable effect upon spinal congestion. But all this is very slender support, gentlemen, and in any case we shall be unable to remedy these terrible deformities of the fingers and the hand, which render our patient infirm, and condemn him to be perpetually indebted to public support.

PICROTOXIN AND ITS PROPERTIES.

By WILLIAM MURRELL, M.D., F.R.C.P.,
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THE recommendation of picrotoxin for admission into the Addendum to the British Pharmacopœia has once more directed attention to a useful but much-neglected remedy. Although isolated by Boullay as far back as 1812—six years before the discovery of strychnine—it has of late failed to maintain its position as a therapeutic agent, its name rarely appearing in the indexes to the volumes of the leading medical journals during the last ten years. It is official in the United States Pharmacopœia and in the French Codex. As it is not an alkaloid, it will presumably be introduced into the British Pharmacopœia under the name of picrotoxinum, in accordance with the system of nomenclature adopted in the case of other neutral principles, such as elaterinum, santoninum, and salicinum. It will probably be defined as a neutral principle prepared from the seeds of *Anamirta paniculata*, the cocculus indicus plant. It has been found that cocculus Plukenetii and cocculus lacunosus contain the same principle, but it is hardly likely that they will be recognized as official sources. Whether the cocculus indicus seeds themselves—the old coccole di Levante—will be made official remains to be seen.

It is doubtful whether picrotoxin is or is not a simple body. Barth and Kretschy assert that it is a mixture of three different substances, which they name "picrotoxin" (a bitter poisonous principle), "picrotin" (a bitter non-poisonous principle), and "anamirtin." Paternò and Oglialoro question the correctness of these statements, and assert that "picrotoxin"

and "picrotin" are merely decomposition products. They object strenuously to the new use of the term "picrotoxin," and rename the picrotoxin of Barth and Kretschy "picrotoxinin," to distinguish it from the true picrotoxin contained naturally in cocculus indicus. They also take objection to "picrotin," which they believe to be identical with a substance named by them "hydrate of picrotoxide." As to anamirtin, they simply deny its existence in pure picrotoxin, and state that it is never found when the drug is purified by repeated crystallization. Schmidt and Löwenhardt confirm the observations of Paternò and Oglialoro, but they have somewhat complicated matters by discovering a new active principle which they provisionally name "cocculin." Their opponents, however, are disinclined to admit the validity of their claims, and assert that cocculin is only anamirtin under another name. Whether picrotoxin is or is not a simple substance is a matter of very little importance from a purely pharmacopœial point of view, for it is well known that digitalin is composed of quite a collection of neutral principles, and that atropine, like the other mydriatic alkaloids, is not a simple body, but can be resolved into tropine and tropic acid.

Picrotoxin has well-marked physical characters, and is usually met with in the form of colorless, feathery crystals having an intensely bitter taste. It is soluble in water in the proportion of 1 in 240 at a temperature of 60° F., but the solution is not stable, for when the temperature falls below 40° nearly half of it crystallizes out. It is much more readily soluble in a mixture of acetic acid and water, and it is probable that a liquor picrotoxini made with acetic acid will be rendered official. Picrotoxin does not form salts, and it is the picrotoxin itself which is employed.

Fortunately, the pharmacological action of picrotoxin has been thoroughly worked out, and we deal with a substance having a very definite physiological action. The peculiar convulsions produced by it in the lower animals were accurately described more than forty years ago. They differ essentially from the tetanic condition caused by strychnine, and are due to stimulation of the motor centres in the cerebrum, or in the medulla and cord. They assume various forms, the swimming, running backward, and moving round in a circle being the most common. Picrotoxin raises the temperature, stimulates the respiratory centre, and in large doses produces salivation.

It is a curious fact that most of our writers on therapeutics are silent on the subject of picrotoxin. Wood, for example, does not mention it, and Ringer refers to it only incidentally. Bartholow gives a good summary of its uses, but the most exhaustive account is to be found in Phillips's well-known "Vegetable Kingdom." Planat and Hammond recommended it in epilepsy, and Gubler proposed its use in chorea. Phillips lays down definite rules for its employment in various complaints—notably in certain forms of dyspepsia, megrim, and dysmenorrhœa. Externally, it is used in the form of a pigment or paint as a parasiticide.

I have employed it largely in doses of $\frac{1}{60}$ grain in the treatment of the night-sweating of phthisis. Some years ago I published a series of 20 consecutive cases, in 19 of which it proved completely successful. The list included 10 men, 7 women, and 3 children. The youngest patient was a boy of 8, and the oldest a man of 45. Usually only a single dose was given at bed-time, but in severe cases it was repeated after an interval of three hours. As a rule, there was very little improvement the first night, but on the second night the perspiration was markedly less, and on the third or fourth it had practically ceased. A great advantage of this mode of treatment is, that it does not make the skin uncomfortably dry. The sweating usually returns in ten days or a fortnight, and the drug has then to be taken again for a few nights. It does not readily lose its effect, and may be used in the same case time after time. It frequently succeeds after the failure of other drugs, such as oxide of zinc, and even atropine. I can speak now from an experience of some hundreds of cases, and have every reason to be satisfied with the results. It probably acts as an anhidrotic by stimulating the respiratory centre.

There seems to be some difference of opinion as to the dose; in a well-known dictionary of medicine it was stated to be $\frac{1}{6}$ grain, but this was subsequently corrected and was obviously a misprint. I believe the correct dose is from $\frac{1}{120}$ to $\frac{1}{60}$ grain. In the Pharmacopœia of the Westminster Hospital we have a pill containing $\frac{1}{60}$ grain made with sugar of milk and glycerin of tragacanth, and I have never given more than 2 of these three times a day. Crichton Browne finds that in rabbits

the toxic dose is $\frac{1}{90}$ grain to the pound, and in guinea-pigs about $\frac{1}{40}$ grain to the pound. There are very few cases of poisoning on record. Many years ago several men suffered severely from drinking rum impregnated with cocculus indicus, and one of them died. In another case, a boy aged 12 died from swallowing 40 grains of a fish-poison containing cocculus indicus, but the strength of the preparation was not known. There might possibly be some difficulty in detecting with certainty the presence of picrotoxin in the dead body, for Giacomelli has described a ptomaine closely resembling it, both in physical characters and chemical reactions. The pharmacological actions would probably serve to differentiate them. Picrotoxin is allied to cicutoxin—the active principle of the water-hemlock—and to coriamyrtin, derived from *Coriaria myrtifolia*. These drugs stimulate the origins of the inhibitory fibres of the vagus, the vascular and respiratory centres, and the motor areas of the medulla oblongata. In its action on the secretions, picrotoxin is allied to pilocarpine and muscarine, and is antagonized by atropine and other members of that group. The best antidotes to picrotoxin are chloral hydrate and bromide of potassium.

ORIGINAL COMMUNICATIONS.

*ARISTOL.**

By DR. P. J. EICHHOFF,
Chief Physician in the Department for Skin Diseases and Syphilis in the City Hospital of Elberfeld.

SINCE the writer, in No. 2 of Volume X, 1890, of the Monatshefte für praktische Dermatologie, called attention to the therapeutic value of aristol, and described a number of indications for its use, there have appeared, within the brief period of a few months, a number of papers from high authorities treating of this substance. This is at once a favorable testimony to the worth of the drug and an evidence of the confidence with which the properties of the new medicament were investigated. This trust was naturally founded upon a knowledge of the formation of aristol from two valued components, viz., iodine and thymol.

I had found aristol efficacious, and therefore recommended it in leg-ulcer accompanied with parasitic eczema, ulcerated lupus, psoriasis vulgaris, tinea tonsurans, seborrhœic (parasitic) eczema, and the ulcers of hereditary syphilis. In chancroid no benefit had attended its use.

In the meantime I have pursued my experiments, and have arrived at a provisional conclusion.

Before giving the results of my further studies, I desire, as briefly as possible, to notice, and, whenever necessary, to criticize, the articles that, from many sources, have followed my original communication.

My observations received their first confirmation from Schuster, who, in No. 6 of Volume X, 1890, of the same journal, spoke of the favorable action of aristol in naso-pharyngeal syphilis and psoriasis vulgaris.

Lassar, on the 12th of March, 1890, exhibited to the Berlin Medical Society a case of psoriasis cured by aristol. A little later, there appeared in No. 11 of the Berlin klinische Wochenschrift an article by Schirren based on material from Lassar's private clinic, and entitled "Aristol in the Treatment of Psoriasis." According to Schirren, 10 cases had been treated successfully in that clinic by means of an ointment containing 10 per cent. of aristol or an even stronger aristol zinc-starch paste. The author was astonished that I "had been able, from the observation of so small a number of cases, to arrive at definite conclusions in regard to the action and indications of a new remedy." I can, with a clear conscience, assure Dr. Schirren that my first paper aimed simply to be an invitation to my colleagues to examine and employ a substance which I had found so useful, stating that my conclusions were not final, but that I proposed to continue my investigations. Dr. Schirren must therefore not object if I have formed a general judgment upon the value of the drug, even though my cases were so few in number.

Schirren is not able to confirm my experience with aristol in lupus. I spoke in my first treatise of ulcerated lupus expressly, and ask Dr. Schirren and all my confrères to notice that it was only in the ulcerated form of the disease that I felt able to recommend the drug; for aristol is no corrosive agent, like pyrogallic acid, bichloride of mercury, salicylic acid, etc., capable of destroying the intact epidermis over a lupous tubercle, or of raising it and penetrating the interior of the tubercle. Aristol,

*A recital of new experiments with reference to the papers hitherto published upon the subject.

from its lack of irritative properties, is not able to attack the sound skin, which therefore acts as a protective to the lupous nodule. I am as fully convinced as formerly that aristol is a very superior remedy in lupus, but it must be allowed to act directly upon the tubercle. This can only occur after ulceration has taken place. The other forms, however, as, *e.g.*, lupus maculosus or lupus verrucosus, need not therefore be deprived of the beneficial influence of aristol. We possess the means of transforming every variety of lupus into the ulcerated form either by scraping or cauterization; and, in fact, I have been able to demonstrate the excellent curative action of aristol upon these modified forms of the malady not only upon the wound, but upon the neoplasm itself. Accordingly, it is only in these modified forms of lupus that I can warmly recommend aristol. But to this question I shall subsequently return.

In No. 2, 1890, of the Oesterreich-Ungarischen Centralblatt für die medicinischen Wissenschaften, von Swiecicki has an article on "Aristol in Gynæcology," in which he praises the drug highly, and recommends it in endometritis, metritis, erosions, hypertrophied cervix, parametritis, and eczema of the vulva. He has never seen it fail or attended by any unpleasant effects, and consequently prefers it to iodoform.

At a session, April 25, 1890, of the Hospital Medical Society of Paris, Brocq exhibited a case of ulcerated epithelioma which had firmly cicatrized after three weeks' use of aristol-powder. The disease had been in existence for twelve years, and in the shape of a horseshoe had involved almost the entire left side of the face. He also showed another case of rodent ulcer rapidly healed by aristol.

For power, acceptability, and harmlessness Brocq prefers aristol in these cases to chloride of potassium, iodoform, iodol, salol, resorcin, etc. Although he does not ascribe a specific action to it in cancer, yet he remarks that it has the property of promoting rapid cicatrization. He also confirms my favorable experience with this remedy in the ulcers of tertiary syphilis, in leg-ulcers, and ulcerated lupus. He adds, moreover, that it has a beneficial influence upon tubercular ulcers.

In No. 18 of the Wiener klinischen Wochenschrift, 1890, Seifert makes a report concerning the use of aristol in the syphilis-clinic of Würzberg. He has confirmed my results in many cases of leg-ulcer. The remedy was employed in 4 cases of ulcerated lupus, 3 of which involved the nose and 1 the face. The first three were not improved, but the last, like my first case, was rapidly healed. If now we ask why a lupous ulcer of the face should be speedily cured by the same agent which failed in lupous ulcer of the nose, the explanation should, perhaps, be that which I suggested when speaking of Schirren's results. For in lupus of the nose the bacilli are situated principally in the cartilage, which conceals and protects them, and aristol is as unable to attack them as it is to act upon the tubercle of lupus maculosus when covered by sound integument. But in ulcerated lupus of the skin the surface, and with it the bacilli, is more accessible.

Seifert has seen aristol prove very beneficial in eczema intertrigo, psoriasis, and syphilis, secondary (moist papules) as well as tertiary (syphilis of the nose and gummata of the skin). His experience, furthermore, contributes to an estimate of the worth of aristol, since it demonstrates that that substance may be taken inwardly in doses up to 5 grammes (7¾ grains) without harm, and, as I had pointed out, without making its appearance in the urine.

In Nos. 18 and 19 of the Deutschen medicinischen Wochenschrift, 1890, Hughes communicates the results obtained by Dr. Seifert from the use of aristol in the Würzberg Dispensatory for diseases of the nose, throat, and larynx. I shall merely mention that, according to Hughes, aristol proves very serviceable in dry rhino-pharyngitis, simple atrophic rhinitis, chronic conjunctivitis, with dryness of the nasal mucous membrane, fetid atrophic rhinitis, specific ozæna, and dry laryngitis. In many cases its action was more decided than that of aristol, and may be compared to that of iodol or sozoiodol, while it is superior to these latter in case of application. Hughes points out that an especially valuable property of aristol is its prompt stimulation of the secretion of mucous membranes.

In No. 19 of the Berliner klinischen Wochenschrift for 1890, Neisser relates his researches with aristol. With his accustomed energy and thoroughness he applied himself to an examination of the new remedy, and reached distinct conclusions. He states that, when introduced (by injection) in watery solution (?) or pure, it exerts no influence, and is itself unchanged;

at least, no iodine could be detected in the urine,—a fact which I had noticed. When, on the other hand, aristol dissolved in appropriate vehicles, as ether, oil, or liquid paraffin, is injected, an active decomposition takes place within the body, and an abundance of iodine makes its appearance in the urine. This seems to be a highly important consideration in regard to the more extended practical employment of the remedy. Neisser, furthermore, describes a series of experiments upon the antibacterial effect of aristol. These, however, led to few positive results, although I believe, as does Neisser likewise, especially in view of his similar experiments with iodoform, that these researches, carried on by means of test-tubes, are of little or no importance in reference to the use and power of the drug upon and within the living organism. For, in the first place, the conditions under which bacteria develop within the tissues of living bodies differ entirely from those to which the same micro-organisms are subject in test-tubes. And, secondly, the drugs employed, in order to counteract the effects of determinate microphytes, act quite differently within the animal economy and in test-tubes. These attempts to estimate the destructive power of a drug upon artificial cultures of certain bacteria, although beautiful and interesting from a scientific standpoint, are absolutely without value in practice. I can even believe that a substance capable of instantly destroying the germ of a culture-plate may be without the slightest influence upon it when introduced within the animal system; and, again, that a body without influence upon experimental cultures may, from its environments within the human economy, be converted into a deadly poison to germs. That such a transformation occurs in the case of aristol is not only a probability, but almost a certainty. For it has been demonstrated that under certain given conditions iodine, though in small quantity, is derived from aristol. And it is an important fact that iodine is one of the strongest known poisons to bacteria. The results of Neisser's therapeutical investigations are confirmatory of my own in every respect. Like myself, he found it useless in the treatment of chancroid. Ulcerated lupus was "very favorably" influenced, while lupous tubercles were not in the slightest degree affected. This is in entire accordance with my own experience, and I have already stated that aristol is no escharotic capable of destroying an epidermic investment. If ulceration has not yet occurred it is necessary to bring the surface, by some means, to the condition in which aristol can prove operative. Neisser concludes that he cannot ascribe to aristol an influence upon lupus as such, but only the power of exciting rapid granulation and cicatrization of an ulcer which is no longer of a lupous nature. In the existence of such an ulcer, whether produced spontaneously or by the action of an escharotic or mechanical means, and in which lupous bacilli are no longer harbored, I had not believed until instructed by Neisser.

Neisser's results were identical with my own in other ulcers, those of late syphilis and ulcerated scrofuloderma, etc., healing "very well" upon the application of aristol, and in 2 cases of unusually deep corneal ulcers it was found "remarkably efficacious." His experience in psoriasis vulgaris was not as favorable as that reported by Schirren from Lassar's clinic, but he esteems aristol an important addition to the therapy of that disease. It has the advantage of being free from the drawbacks which attach to some other remedies, as, for instance, chrysarobin.* Neisser perceived no benefit to follow the use of aristol in gonorrhœa, lichen ruber, psoriatiform eczema, and chronic infiltrated eczema, though in the last-named condition the remedy was employed but for a few days, and a further trial is promised.

I consequently feel myself warranted in concluding, from the thorough work of Neisser, that my first studies of aristol have been confirmed in the main, though slight differences of opinion may exist. I have, therefore, no cause to repent my uncommonly enthusiastic recommendation, but am all the more justified in desiring my colleagues to make trial of aristol.

A further contribution to the literature of the subject is made by Löwenstein in the Internationalen klin. Rundschau, Vienna, May, 1890, No. 20. He treated with great satisfaction 3 cases of simple and 1 of syphilitic ozæna by means of aristol. The use of this remedy alone caused fœtor to disappear, and the formation of scabs to cease within a period during which other agents seldom effected any improvement.

In No. 2 of the Archivos internacionales de

*Dr. Richter, of Glatz, informs me that he has cured a general psoriasis by the use of an aristol ointment.

Laringologia, of Barcelona, Rohrer writes of the efficacy of aristol in purulent inflammation of the middle ear, rhinitis, external otitis, and ozæna. In No. 8 of the Revista de Ciencias médicas, of Barcelona, J. Soler y Buscallá describes the beneficial action of the same remedy in various kinds of venereal ulcers, and in buboes. He especially praises the cicatrizing power of the drug. To the Dermatological Congress, of Berlin, Rosenthal on the 4th of March communicated his very sátisfactory experience with aristol in lupus, and on the 6th day of May he spoke of its favorable influence in lupus erythematosus when aided by the Pacquelin cautery.

Finally, Gaudin (Journal des maladies cutan. et syphil. de Dr. Fournier) obtained in the St. Louis Hospital, of Paris, the happiest results from aristol in psoriasis vulgaris, varicose leg-ulcers, chancre, and eczema of hairy parts, and extols it particularly on account of the absence of intoxication or any other unpleasant and prejudicial sequelæ. He regards it as of superior virtue in promoting rapid cicatrization.

After this short review of the hitherto-published papers, which encourage the more extended employment of aristol, I proceed to relate my own further experience with this remedy. I have not limited myself to the affections in which I had at first used it, but have made trial of it in a number of other diseases.

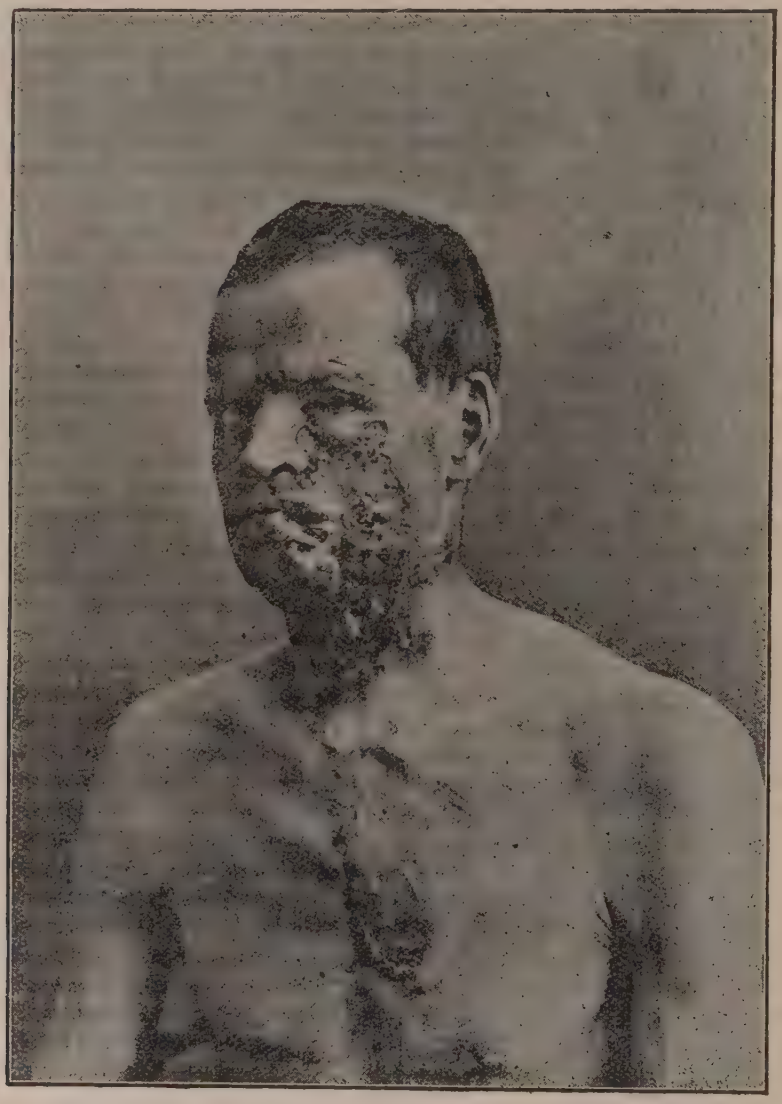
In 4 cases of favus affecting the hairy scalp I employed aristol in the following manner: The diseased area, or the whole scalp being smoothly shaved, it was thoroughly washed every morning and evening with potash-soap, and then anointed with a 10-per-cent. aristol salve, and covered with a rubber cap. This treatment was productive of no irritation, but, after being continued for several weeks, was followed by no improvement; so that aristol, at least when applied in the manner described, must be deemed of no avail in favus. This result may be easily explained. Aristol is too little of a local stimulant to be able to produce erosion and inflammation of the superficial layers of the integument, and so reach the favus-germs lying deep in the follicles. For the efficient management of favus I was driven to employ a substance capable of exciting an active inflammation, and thus permitting, as I have elsehere shown, the white blood corpuscles to attack the root of the evil.

Different was the result in tinea tonsurans. Eleven cases of this affection were treated with aristol, according to the same method as I had used in favus. Of this number 9 were cured within a period of from six to eight weeks, while 2 cases proved rebellious. Notwithstanding these two failures, we must concede to aristol a high position as a remedy in this stubborn parasitic disease. For whoever is engaged to any extent in the care of diseases of the skin knows how obstinate trichophytosis may be, especially when it attacks the hairy scalp, and how it may resist the most energetic methods and the most various remedies. I have long since abandoned the practice of epilation in this disease, and also in favus and parasitic sycosis. Although a certain number of the germs are withdrawn with the hairs, an abundance remain buried in the follicles, where they can develop and multiply, in spite of epilation, which is a very troublesome treatment to the physician, and a very painful one to the patient without being accompanied by any corresponding benefit. Eight cases of parasitic sycosis of the face, or mons veneris, were treated by aristol, partly in the form of a 5-per-cent. ointment, partly in that of a 5-per-cent. solution in collodion. All were cured in from two to four weeks without the aid of any other remedy, or even epilation. The same agent was employed in another mycosis, viz., parasitic eczema. These cases were 6 in number, affecting the face, arm, scrotum, and fingers. When extensive surfaces were involved, a 5- or 10-per-cent. ointment was used; to isolated spots a solution of 10 per cent. of aristol in flexible collodion, with 10 per cent. of castor oil, was applied. Five cases were completely cured in from seven to fourteen days; in 1 case no amendment occurred even after a longer period, so that I was obliged to substitute other means.

From these experiments I convinced myself that aristol occasions no irritation, even upon regions where the skin is most tender, as, for instance, upon the scrotum.

My second series of experiments embraced 9 cases of lupus, of which 5 were macular and 4 ulcerated. Aristol in ointment, powder, oleaginous or ethereal solution was absolutely without effect upon spots of lupus maculosus, but lupous ulcers healed rapidly under its influence. In 3 of the 5 cases of lupus maculosus which received no benefit from aristol, the intact epiderm was removed by the spoon or

Pacquelin's cautery, and various forms of the medicament applied to the artificial ulcers. Excellent scars were soon obtained in every instance. I am not optimistic enough to believe that all the bacilli were removed by the sharp spoon or destroyed by the cautery. I am my care at this time. When necessary, the bottoms of the ulcers were scraped, in order to clear away unhealthy granulations, and the undermined edges were trimmed with the scissors, after which aristol in ointment or powder was applied. These were all speedily cured,



Syphilitic Gumma Before Treatment in my Department of the City Hospital.

obliged, therefore, to attribute the cure unconditionally to the aristol, which annihilated the remaining bacilli. All the cases cured in this manner were seen about two months after dismissal, and no relapse had occurred.

A dermatosis related to lupus is scrofuloderma. Five cases of this affection were under and the scars were excellent. A case of gangrene of the right great toe, the result of exposure to cold, and a case of chronic leg-ulcer cicatrized nicely under a 10-per-cent. ointment of aristol.

The local application of aristol is attended by brilliant success in the gummy ulcers of so-

called tertiary syphilis. Five cases were thus treated, some of which involved the skin, and others mucous membranes. In the latter I generally used the drug in the form of powder; in the former sometimes as an ointment, sometimes in ethereal solution, and sometimes in such excellent and rapid cicatrization in tertiary syphilis. No harmful or unpleasant effects accompanied its use; on the contrary, its employment was agreeable to patients.

One of these cases was so typical that I caused photographs to be taken before and

Syphilitic Gumma Cured by Four Weeks' Treatment with Aristol.

powder. The most severe ulcerated syphilides healed under this local treatment in about fourteen days. The general management, conjoined with the local, consisted in action upon the skin or the administration of iodide of potassium.

I have never seen from any other remedy after cure. These were obtained by Meisenbach's process, and copies are here represented for my readers. Explanation or history is superfluous. The representations speak for themselves.

A bubo which followed a chancroid was the seat of unhealthy granulations and would not

heal. A 5-per-cent. aristol ointment effected a prompt cure. Equally good was the result in a case of gangrenous bubo. Under an aristol ointment a line of demarcation soon formed, the dead tissue was thrown off, and the resulting deep ulcer very rapidly granulated and cicatrized.

I employed this remedy in 9 cases of chronic urethritis in prostitutes. It was applied in the form of cylinders. In 6 of these cases it proved efficacious, while in 3 it failed.

In 3 cases of acute gonorrhœa in the male I made use of aristol in the form of a 5-per-cent. emulsion or oleaginous solution as an injection. It was apparently without effect, and in a short time I substituted another injection. Yet I was subsequently surprised to find that those cases in which aristol was first used and followed by other medication were much more rapidly cured than those treated by some other injection from the beginning.

A soft chancre received no benefit. A squamous eczema of the thigh was cured by a 5-per-cent. ointment. In a case of condylomata of the anus a 5-per-cent. ointment with general treatment was of good service. The offensive odor of simple ozæna was destroyed by the daily insufflation of powdered aristol. Two cases of psoriasis vulgaris were cured in fourteen days by means of a 10-per-cent. ointment of aristol and a 10-per-cent. solution in collodion. Two prostitutes suffering from gonorrhœa had obstinate erosions and ulcers of the portio vaginalis. These soon healed when powdered daily with aristol.

In conclusion, I will merely mention a case of lupus erythematosus which had existed for years, and involved face, feet, and hands. According to the principle of first securing a raw surface, I applied for a few days a 10-per-cent. ointment of pyrogallic acid; after this had led to ulceration I began to use a 10-per-cent. aristol ointment, after which the case healed in ten days with a fine, smooth, and white scar.

This finishes my second series of experiments, which I purposely narrated with the utmost possible brevity so as not to weary my readers with histories of cases, but simply display the naked truth.

My continued researches, as well as those which have been published by other writers, confirm the statements of my first paper in each and every respect. They may be thus summarized:

1. Aristol is certainly a substance completely devoid of danger.

2. It stains neither the skin nor the linen of patients. It has proved irritant in but a few cases, and in those the action can scarcely be attributed to the aristol as such. It is agreeable to most patients on account of the slight odor of thymol which it possesses.

3. It is of no value in acute gonorrhœa, chancroid, or favus.

4. It is an excellent remedy in psoriasis, parasitic eczema, tinea tonsurans, and sycosis, since it does not, like most other drugs used in those affections, irritate, stain, or exert a toxic action, and nevertheless it is efficacious.

5. It has been followed by excellent results in a series of chronic ulcerated conditions of the skin and mucous membrane, as leg-ulcer, gummy ulcer, scrofuloderm, cutaneous carcinoma, open bubo, gangrenous ulcer, and lupus vulgaris (in the stage of ulceration). In all these cases aristol is an unusually good and at the same time harmless cicatrizing agent.

6. Besides its use in dermatology, aristol has already been found serviceable in rhinology, laryngology, and gynæcology.

For all these reasons I am convinced that aristol constitutes a permanent addition to our resources, and one not to be undervalued. It seems well adapted to displace a number of other remedies, and thereby aid in preventing what is justly feared—the undue accumulation of new remedies. On the other hand, it favors a simplified therapy by reason of its multifarious activity.

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*CHLORALAMID.**

By CHAS. H. STEELE, A.M., M.D.

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CHLORALAMID is properly a chloral-formamid or formidate of chloral with the formula $CCl_3CH\begin{cases} OH \\ NHCHO. \end{cases}$

It is chemically a union of chloral anhydride (CCl_3CHO) with formamide ($CHO.NH_2$).

Prof. J. von Mering was its discoverer and E. Schering, of Berlin, its exclusive manufacturer. It occurs in the form of colorless, very faintly, but not unpleasantly, bitter, non-caustic, odorless crystals, melting at 239° F., and soluble in from 9 to 14 parts of cold and less of warm water, in 1 part of absolute

* From Pacific Medical Journal.

and 1½ parts of 96-per-cent. alcohol. To understand its time of action it is well to remember that it requires five hours to dissolve 20 grains in 2 ounces of water, and only fifteen minutes when the menstruum is 1 drachm of rectified spirit. No precipitation occurs on adding the alcoholic solution to water.

TESTS.

Upon heating chloralamid to its melting-point, 239° F., chloral is liberated and may be tested separately. Heated with a solution of potassa it emits odors of chloroform and ammonia. A few grains in a solution of 4 drops of 90-per-cent. carbolic acid in ½ ounce of strong sulphuric acid gradually heated to boiling give rise to a bright-red color and a strong odor of chlorine. With the same test phenacetin produces a dark, purplish-brown mixture, with a strong acetous odor and sulphonal, a bright green, changing to dark green upon the further addition of strong sulphurous acid. Fehling's and Pavy's solutions are not affected by chloralamid.

INCOMPATIBLES.

The drug is rapidly decomposed by water heated above 140° F. and by caustic alkalies, and slowly by alkaline carbonates.

ADMINISTRATION.

The dose varies from 15 to 60 grains, while the majority of experimenters rely upon a single dose of 30 grains, and rarely find 45 grains necessary. A few consider this last dose as the limit of safety. A child of 11 years of age was given 7 grains, and another, 4½ years old, 5 and 10 grains. In any case it is better, especially with new drugs, to commence with the smallest dose and increase cautiously. To secure the best results the drug should be administered from one to one and one-half hours before bed-time. It may be prescribed in powders alone, or triturated with oleosacchara fœniculi, capsules, wafers, or dissolved in wine or brandy, to which water may be added as desired. Some difficulty will be experienced in taking the powder in water, tea, or milk, as advised by a few, on account of its slow solution and tendency to adhere to the sides of the vessel. It is better to wash down the powder with a draught of milk, weak tea, or water. An advised prescription is:—

℞ Chloralamid, . . . gr. xiv.
Acidi hydrochlorici diluti, . gtt. vj.
Syrupi rubi idæi, . . ʒij.
Aquæ, . . q. s. ad ʒij.
Sig: To be taken in one or two doses.

As an enema, in which form it is unirritating and slow in action, we may use:—

℞ Chloralamid, . . . gr. xlv.
Acidi hydrochlorici diluti, . gtt. iij.
Alcohol, ... ♏xx.
Aquæ, ... ʒiij.

So administered, it is considered by a few to be most reliable in its action.

However used, it must be remembered that its solution is not to be heated.

PHYSIOLOGICAL ACTION.

Locally, chloralamid has been found to be absolutely free from irritation, even where a 10-per-cent. solution has been applied to the delicate conjunctiva. Internally, no effect has yet been discovered upon digestion and circulation, except in relation to the vasomotor centre. Here we have a trivial difference in opinion. A single authority (Langgaard)—a possible pessimist, for he also makes the same statement regarding the respiratory centre—affirms that blood-pressure is lowered through depression of the vasomotor apparatus. Reichmann admits that this is slightly so; but von Mering, Zuntz; Professor Leech, of Guy's Hospital; George P. Cope, of Dublin, and many others, deny this action; while Rabow, of Lausanne, goes still further, and states that the formamide, liberated from the chloral, stimulates the vasomotor centre in the medulla, and raises blood-pressure.

Chloralamid has the property of inducing an apparently natural sleep, commencing in from one-half to three hours, and lasting from six to ten hours. The usual interval between the administration of the dose and the advent of sleep is from one to two hours, but this depends so greatly upon the slow solubility of the drug in the watery fluids of the stomach that it is possible that absorption may not be completed or sleep commence until the morning after the evening dose. This delay might be obviated by employing an alcoholic solution. In some cases the sleep is interrupted, and even many failures are reported. However, all this depends upon the dose administered, 45 grains, equalling 30 grains of chloral hydrate, being considered necessary to insure certainty. The frequency o

the failures may be estimated from the fact that Dr. Cope reports only 4 per cent., Dr. Williams 6½ per cent. of all cases, and Professor Leech no failures in 19 patients. Some consider the sleep to be deeper than that obtained by chloral.

To what this hypnotic action is to be attributed is, as yet, only a matter of conjecture. Dr. Eugen Kny supposes that, in the alkaline blood, chloral is gradually liberated, and he partially bases this opinion upon the presence of uro-chloralic acid in the urine. It would seem, however, that more depression would have been discovered if such were the case. The only depression positively established was that of reflex action in frogs, after injecting ⅓ to ½ grain.

INCIDENTAL EFFECTS.

While no unpleasant after-effects were noticed by many authorities, no disturbance of the heart, respiration, temperature, kidneys, digestion, or appetite (but rather improvement of appetite, according to Dr. D. R. Paterson), a few have occasionally found slight headache upon awakening, alone or with lassitude, and a desire to sleep during the next morning or entire day. Among the other unusual effects are thus arranged in order, commencing with those most frequently reported, slight or severe vertigo, thirst, nausea, dryness of the mouth, loss of appetite, slight delirium, vomiting, cardiac weakness, rapid and feeble pulse, and restlessness which necessitated forcible restraint. The more severe symptoms appeared after large doses, over 30 grains, and were not consecutive or persistent, as is the case with sulphonal. Patients do not seem to become accustomed to its use, nor is there evidence that the drug is cumulative in action.

One hour after a dose of 60 grains, there have, in two instances, appeared vertigo, intoxication, volubility, inco-ordination, occipital headache, nausea, and either no change or slight increase in the pulse-rate. These symptoms were at their height in about three hours after the dose, while slight vertigo and cephalalgia persisted during the second day.

These incidental effects seem to be very rarely exhibited, even after the largest therapeutic dose, and are proportionally not more frequent than with chloral or morphine.

THERAPEUTICS.

Chloralamid is successfully employed in conquering insomnia, and particularly that form denominated simple or idiopathic insomnia, not due to excitement or severe pain. It is, furthermore, possible for the wakeful patient to enjoy several nights of natural sleep after a single dose. The best results occur when the drug is used in insomnia due to nervousness, neurasthenia, hysteria, "spinal disease," or old age; next best when the causes are chronic alcoholism, alcoholic excess, cardiac and bronchial asthma, pleuritis, phthisis, pericarditis, arterial sclerosis, organic heart disease, typhoid fever, gastritis, subacute nephritis, ascites, diabetes mellitus, and in the morphine habit. It is less effective when wakefulness is due to tabes dorsalis, neuralgia, progressive paralysis, the excitement of insanity, cerebral softening, with delirium, melancholia, chronic mania, and acute mania. In these conditions, doses of from 30 to 60 grains are required, providing such doses are tolerated.

The drug is useless when the insomnia results from paralytic dementia, maniacal excitement or hallucinations, severe neuralgia or other pain, violent cough, distressing headache, delirium of cerebral apoplexy, and from delirium tremens.

Even pain, when not acute, is often relieved, and the large doses necessitated are by many patients preferred to morphine. Chloralamid, in doses of from 20 to 60 grains, has checked the pains of thoracic aneurism, carcinoma of the stomach and liver, sarcoma of a rib, erysipelas, rheumatic fever, floating kidney, neuralgia, gall-stone, varicose ulcer, and alcoholic neuritis.

In chorea, a boy of 11 years of age was cured in five days by 15 grains of the drug three times daily, and, in like manner, a girl, after receiving no benefit from other forms of treatment, was afforded relief in eight days.

When administered in phthisis it was found that the troublesome night-sweats disappeared.

EPHRAIM CUTTER, M.D., LL.D., F.S.Sc., at the International Congress at Berlin read five papers, as follows: "Electrolysis of Myoma," proving his priority over all others; "Food in Fibroids," and "Cutter's Stem Pessary," before section of Gynæcology; "Food and Tubercle," before section of Pathology; "Physical Causes of Heart Disease," before section on Internal Medicine. He also spoke before von Leyden's section on "Tubercle," by invitation. He was one of the few Americans in the 300 elected from 6000 to be presented to the German court. He writes that he was treated with more courtesy by the Germans, where his ideas as to bacteriology are different from theirs, than by anybody else. He found people that knew him from all parts of the world.—*Albany Med. Annals*, Sept. 1890.

ABSTRACTS.

AN INSIDIOUS GRAVE FORM OF GONORRHŒAL OPHTHALMIA.—At a meeting of the French Ophthalmological Society, held May 8, 1890, M. Trousseau, of Paris, remarked that in addition to the violent acute form we must recognize the existence of an insidious variety. The latter is not less serious than the former, and is characterized by slight swelling of the eyelids, a scanty discharge, an intense chemosis, and the tardy development of formidable corneal accidents. He cited a case in which the sole alarming symptom had been the chemosis. The mucous membrane and the cornea had been infected by gonococci, which had escaped cauterization on account of their sub-epithelial situation.

Having scraped the base of the corneal ulcers, the speaker inoculated the corneas of 3 rabbits with the material removed. A purulent inflammation of the eye was rapidly produced. It follows that the palpebral swelling and the abundant suppuration are not always elements of gravity in gonorrhœal ophthalmia, and that the chemosis is more to be feared. Whatever the initial symptoms, any conjunctivitis should be considered serious which occurs in a subject of gonorrhœa.—*Recueil d' Ophthalmologie*, May, 1890.

TWO CASES OF HEMIANOPSIA FOLLOWING UTERINE HÆMORRHAGE.—At the same meeting M. Chevallereau mentioned 2 cases of hemianopsia following copious hæmorrhages from the womb. It might be thought, as has already been maintained, that the visual affection is generally dependent upon hysteria, but these 2 cases were devoid of any stigma pertaining to that neurosis. The speaker inclined to attribute the occurrence to circulatory disorder within the brain, to ischæmia due to thrombosis of the arteries, either of that portion of the cortex considered as the centre of vision or of the optic tracts.—*Recueil d' Ophthalmologie*, May, 1890.

CHANCRE OF THE CONJUNCTIVA. — Dr. Touchaleaume, in his inaugural thesis (1889), has made a very interesting study of this lesion, which he had the opportunity of observing in his studies at Nantes. He has only been able to collect 18 reported cases. It is generally the result of an impure kiss, and situated at one of the angles of the eye. Its principal characters are: an ulcer of erosive form and sometimes with sharp-cut edges. Oftener, however, it appears as an intestinal induration with preauricular adenitis. Conjunctival chancre might be confounded with cancer or a gummy ulcer. But the evolution of cancer is much slower, it lasts for years, its color is wine-red, and it has an irregular surface, which easily bleeds. The pain is at times severe, and often no preauricular adenitis is present. Gumma of the lids is very rare, and especially in the form of an ulcer. Moreover, it is often accompanied by an inflammation of the iris or other internal membranes of the eye.—*Recueil d' Ophthalmologie*, May, 1890.

ANÆSTHETIC LEPRA OF THE EYE.—At a meeting of the Ophthalmological Society of Paris, held June 3, 1890, M. Parinaud, in presenting a patient who was the subject of anæsthetic lepra of the eye, spoke as follows: Ocular leprosy, scarcely known except from the descriptions of Norwegian and Italian writers, has been recently observed in France by M. Panas and M. Meyer, who, you will remember, have made it the subject of an interesting communication to this society. The ocular lesion of the patient whom I show you resembles in no respect the descriptions of our confrères. It is, however, but a different form of the same malady, the anæsthetic form, which, according to M. Charcot, is rare; at least, in its perfect type; for anæsthetic symptoms are often seen combined with the tubercles which especially characterize the affection.

The patient is a man of 53 years of age, and has lived in Cuba for twenty-three years. He returned to Europe twelve years ago. He has suffered for eight years from the general form of the disease, which manifested itself by spots upon the skin. These disappeared spontaneously, and subsequently the hands were deformed. Neither tumors nor excrescences have ever existed upon any part of the body. At the present time there are patches of cutaneous anæsthesia and atrophy of muscles. The atrophy particularly affects the muscles of the limbs. For this reason he experiences considerable difficulty in walking. Upon the hands, the thenar and hypothenar eminences are effaced, and the

claw-like deformity, although not peculiar to this disease, is nevertheless sufficiently characteristic. The fingers are not mutilated by sphacelus, as sometimes occurs.

The ocular troubles began to develop two years ago. To-day the condition is as follows:—

1. Double lagophthalmos, with anæsthesia of the skin of the eyelids. The lower lid, in which the trouble is most pronounced, is the seat of an ectropion much greater than in the most complete facial paralyses. When the attempt is made to close the eyes, the balls are incompletely covered and rolled upward beneath the upper lid. The relaxation of the lids is evidently due to atrophy of the orbicularis.

2. Besides a rather marked injection of the conjunctiva, there is present a vascular keratitis, which occupies the lower half of each cornea. This keratitis, accompanied by a quite evident anæsthesia of the cornea, and situated in that part of the membrane not protected by the lids, seems comparable to a neuro-paralytic keratitis. In the right eye the desquamation of the epithelium is limited by a curved line to the lower concavity, which very accurately circumscribes the lesion.

3. A double iritis or irido-choroiditis has given rise to synechia in both eyes. No neoplastic formation can be detected upon the iris. The iritis appears to have developed without any inflammatory reaction.

The synechia has given rise to an acute glaucoma of the left eye. The glaucoma developed abruptly three months ago. For the past ten days the patient has suffered intense pains, together with a rapid and definitive loss of vision. At present the eye is very hard, but not painful. It is this loss of the left eye that has brought the man to Paris. I have done an iridectomy upon the right eye with a view of averting glaucoma. The operation was well borne, and has sensibly improved the vision. I furthermore propose to perform a double tarsoraphy, indicated by the lagophthalmos and the keratitis, and which, under similar circumstances, has been advantageously done by the Norwegian surgeons.

Anæsthetic lepra seems to be particularly benign, especially when it develops in a climate in which it does not usually prevail. I therefore have hope that this patient will receive material benefit from the two operations. —*Recueil d' Ophthalmologie*, June, 1890.

Ocular Leprosy.—This is the subject of a memoir written by Dr. Lopez, of Havana, as candidate for the title of Corresponding Member of the Ophthalmological Society of Paris. The following summary of its contents was given the Society by M. Belliard:—

In leprosy the eye is frequently implicated. Half of the lepers under treatment in the St. Lazarus Hospital at Havana presented manifestations of the disease in the eye. The annexes—the lids in particular—are nearly always attacked.

Passing in review the different portions of the visual apparatus, it is found that:—

The eyelids are affected from the beginning in most cases. In two thirds of the number they present the same lesions which give a characteristic physiognomy to lepers. If we examine in detail these affections of the lids, we find:—

Anæsthesia.—Sensibility disappears in patches. Upon these patches temperature is diminished and the glands are destroyed, which renders the skin dry in places.

Tubercles are frequent upon the eyelids. Their agglomeration upon the upper lid occasions an incomplete ptosis, the levator muscle being unable to raise the enlarged lid.

Madarosis.—The loss of the eyelashes and eyebrows is one of the early symptoms of the affection. The hairs during this time preserve their normal color and remain abundant. Before they fall the direction of the lids may become changed, and may produce lesions of the eyeball by distichiasis.

Ectropion occurs quite frequently in lepers. It may involve either or both lower lids, and follows the evolution of the leprous patches. After having destroyed the glands the affection attacks the terminal filaments of the seventh pair, and thus contributes to eversion of the lid.

Entropion is very rare.

Paralysis of the Orbicularis Palpebrarum.—The invasion and destruction of terminal nerve-filaments distributed to the orbicularis muscle causes relaxation of that sphincter, and, consequently, an inability to close the lids.

Lachrymal Apparatus.—Notwithstanding the frequency of ectropion, lachrymation, so inseparable from this lesion when due to other cause, is never engendered. Dr. Lopez, without the support of an autopsy, supposes that the diminished secretion of tears is the result of leprous involvement of the glands.

The conjunctiva may present the following alterations: Anæsthesia, conjunctivitis, pterygium, and tubercles.

Anæsthesia of the conjunctiva is frequent in all varieties of leprosy. It affects equally the palpebral or the ocular conjunctiva.

The conjunctivitis of lepers may arise from two causes: it may be of traumatic origin or symptomatic of tubercle. Anæsthesia of the conjunctiva, especially if joined to insensibility of the cornea, exposes the eye to continual irritation from dust and other external influences which no longer provoke ocular reflexes. Hence arise rebellious attacks of acute or chronic conjunctivitis.

Pterygium, which sometimes develops in unaccustomed spots, is produced by two causes: 1. The continual action of external agents upon the ocular conjunctiva. 2. Epithelial desquamation of the cornea or some loss of substance at a point to which the hypertrophied conjunctiva contracts adhesions.

The tubercles of leprosy develop themselves in the conjunctiva in the same manner as in the skin. Their favorite seat is along the line of sclero-corneal junction. They appear under the form of small, white or pale-red elevations, which increase fatally in size until they totally destroy the organ.

Cornea.—The affections of this structure are frequent and various. Anæsthesia is the most frequent symptom, following generally anæsthesia of the skin and conjunctiva.

Tubercles. — Without speaking of those which frequently are found in the sclero-corneal line or its neighborhood, the cornea itself may be invaded. A small, white spot, which may be easily mistaken for a leucoma, appears in a certain part of the cornea, usually its lower half, without exciting inflammation of the contiguous conjunctiva. But this infiltration is only the first degree of the affection, the tubercle advances to complete development, and, in a third period, ulceration involves the destruction of the tissue attacked.

Leprous keratitis, a late manifestation, may occur as an isolated lesion or as a complication of tubercles of the eyeball. It appears at first as a diffuse white spot, resembling a leucoma, and gives rise to no inflammatory reaction of the cornea, iris, or conjunctiva. Its whitish color and ground-glass aspect recalls that of Hutchinson's keratitis. It is easy, however, to make a differential diagnosis between the two affections; the cornea preserves its form, even when completely invaded. The functional disorder varies according to the extent of the infiltration, complete blindness being the result when the entire cornea is attacked. This keratitis is frequently symmetrical, but is usually more advanced in one eye. Corneal ulcers are not rare among lepers. The anæsthesia favors the action of external vulnerating causes. Finally, corneal staphyloma may develop and precede atrophy of the cornea.

The sclerotic is equally amenable to invasion by tubercle, which, to a superficial view, may be confounded with rheumatic episcleritis. But leprous tubercle may be easily distinguished by the fact that other leprous manifestations co-exist, and that it is indolent and progresses fatally.

The iris may be attacked by tubercle and iritis. Tubercle is always complicated with iritis. Tubercle may develop in any part of the iris. Its place of election, however, is the great arterial circle of the iris, whence it may invade the cornea, sclerotic, iris, and ciliary processes. The iritis of leprosy pursues an insidious, essentially chronic course, and is rarely observed as a primary ocular manifestation. It is a relapsing iritis, having periods of repose broken by attacks which last one or several months. It is accompanied by few inflammatory phenomena, sometimes by a circumconic injection of the subconjunctival vessels. But in all cases the pupil presents a more or less pronounced myosis, and does not react to light, the first appreciable symptom. Generally there is little pain, and the change of color is, especially at first, but slightly marked. Some patients have posterior synechiæ in one or both eyes without exhibiting a trace of inflammation during the period of intermission.

Lesions of the crystalline lens are secondary and consecutive to invasion of the ciliary region. Loss of transparency results, or luxation, if the zonule is destroyed.

The deep membranes, choroid, and retina are less frequently involved. They may be attacked at a late stage of the disease, but ophthalmoscopic examination is then impossible.

Functional Disorders.—Hemeralopia appears at certain ill-defined periods, and often affects several individuals simultaneously. It may be due to leprous anæmia, which is present from the beginning.

To conclude: the leprous manifestations generally proceed from the surface to the interior. Keratitis and iritis are the most frequent causes of the loss of vision. Lepers possess normal vision during a greater or less time. When the eyes are diseased vision diminishes gradually, according to the degree of the lesions, until blindness becomes complete and irremediable.

At an advanced stage of the malady keratitis is replaced by atrophy of the cornea. The conjunctiva is the seat of xerosis, and at last the tubercle, always slowly advancing, invades all the membranes, destroys all the tissues, ulcerates the eye, converts it into a sanguinolent tumor, brings about a total atrophy of the organ, and finishes by leaving only a formless stump lost in the depth of the orbit.

Treatment.—The physician should, above all, seek to prevent extension of leprosy to the organ of vision. The anæsthesia has a fatal influence, since the insensitive eye is left undefended against irritating substances floating in the air. Patients should be kept in properly sheltered rooms, made to wear glasses, and, as far as possible, isolated. Ectropion should be operated upon in the usual manner. Surgical wounds heal well in lepers. It seems impossible to arrest the course of leprosy when it has attacked the eye, but Dr. Lopez has no doubt that actual cautery of the tubercle will retard its progress.

Local treatment should consist of lotions of boric acid (3 to 100), or bichloride of mercury (1 to 5000), repeated several times daily. Ulcers of the cornea should be treated with ointment of yellow oxide, 30 centigrammes, or of boric acid, 1 gramme to 10 grammes of vaseline. In iritis atropine, 5 centigrammes to 10 grammes, should be used to mydriasis. In short, to avoid repetition, the different affections should be dealt with according to the usually employed methods. It is only possible to obtain a more or less temporary amelioration, but never a radical cure, since we possess no agent which is to leprosy what mercury is to syphilis. — *Recueil d' Ophthalmologie*, July, 1890.

An Austrian physician claims that the sting of a bee will inoculate a person against rheumatism for six months. While the patient is about it, he might as well get inoculated by 150 bees, and thus be proof against rheumatism for a life-time. The bees don't render their bills quarterly.

THERAPEUTIC NOTES

TREATMENT OF SCARLET FEVER BY LARGE DOSES OF ACETATE OF AMMONIUM.

At the Academy of Medicine, August 5, 1890, M. Vidal (d'Hyères) said that, without doubt, the acetate of ammonium is tolerated in doses of 1 gramme per year of age in children and adults. Nevertheless, he has never administered to adults more than 35 grammes daily. The acetate of ammonium in these large doses lowers temperature rapidly, and constitutes a valuable mode of treatment in scarlatina, and, perhaps, also would be equally beneficial in the other eruptive fevers.

The earlier in the case the drug is given, the more rapid its action.—*La Tribune Médical*, August 7, 1890.

IODOFORM PILLS IN HÆMOPTYSIS.

Chauvin and Jorissenne recommend:—

℞ Iodoform, . . 0.05 (¾ grain).
Extr. gentian, . q. s.

M. et ft. pil. no. j.

Ten centigrammes (1½ grains) tannin may be added. Iodoform succeeds, even in cases where ergotin has failed. Three to 5 pills are to be taken in twenty-four hours. They never disturb the stomach. — *La France Méd.; Deutsch Med. Zeitung*, August 14, 1890.

CHEST PAINS.

For the troublesome pains located under the sternum, and elsewhere in the chest, frequently complained of in bronchitis, M. W. Emerson, M.D., has found this formula of much value:—

℞ Sodii salicylatis,
Potassi nitratis,
Pulv. ipecac. et opii, āā gr. ij.
Fiat capsula, j.

Sig.: Every three hours.—*College and Clinical Record; Medical World*, August, 1890.

BRONCHITIS.

℞ Ammon. muriat., . . ℥j.
Syrup. senegæ, . . . f℥ss.
Tr. opii camphorat., . . f℥j.
Syrup. tolutan., . . f℥ss.
Aquæ gaultheriæ, q. s. ad f℥ij.

M. Sig.: Teaspoonful every two hours.—Dr. O. P. Rex, in *Archives of Pediatrics; Medical World*, August, 1890.

PLEURISY (ANDERS).

The treatment should consist of rest in bed, animal broths, and milk. The following febrifuge mixture should be given to a child 4 years of age:—

℞ Sp. ætheris nitrosi, . . gtt. xx.
Liq. ammon. acet., . . f℥ss.
Chloroformi, . . . gtt. ij.
Aq. menthæ vir., q. s. ad ℥j.
M. One dose.
Sig.: Take every two hours.—*Ibid.*

The following prescriptions are in use in the Nervous Department of the Vanderbilt Clinic:

MIST. CEPHALALGIACA.

℞ Ammon. chlorid., . . gr. iss.
Morph. acetat., . . . gr. ⅛.
Caffein. citrat., . . . gr. $\frac{1}{20}$.
Sp. ammon. aromat., . . ♏ $\frac{1}{3}$.
Aq. menth. pip., . . f℥ss.
Elix. guaran., . q. s. ad f℥j.
M. Dose: One drachm.

MIST. CHOREA.

℞ Liq. potass. arsenit., . . ♏iij.
Aq. menth. pip., q. s. ad f℥j.
M. Dose: One drachm.

MIST. CHOREA COMP.

℞ Liq. pot. arsenit., . . ♏iij.
Chloral. hydrat., . . gr. v.
Aq. menth. pip., q. s. ad f℥j.
M. Dose: One drachm.

PULV. "DIGESTIVE."

℞ Pepsin., ... gr. v.
Bismuth. subnitr., . . gr. x.
Strychn. sulph., . . gr. $\frac{1}{100}$.
Carbon. ligni, . . . gr. v.
Thymol, ... gr. ¼.
M. Dose: Twenty grains.

MIST. "D. T."

℞ Pot. brom.,
Sod. brom., . . āā gr. xv.
Chloral. hydrat., . . gr. x.
Tr. zingib., . . . ♏x.
Tr. capsici, . . . ♏v.
Sp. ammon. arom., . . f℥j.
Aquæ, . . q. s. ad f℥ij.
M. Dose: Two drachms.

TABLET EUONYMIN CO.

℞ Euonymin, . . . gr. ¼.
Podophyllin.,
Aloin., . . . āā gr. ⅛.
M. One tablet.

MIST. EPILEPTICA.

℞ Potass. bromid.,
Sod. bromid., . . āā gr. x.
Ammon. bromid., . . gr. v.
Sod. bicarb., . . . gr. ij.
Liq. potass. arsenit., . . ♏j.
Aquæ, . . q. s. ad f℥j.
M. Dose: One drachm.

MIST. EPILEPTICA COMP.

℞ Tr. belladonn., . . . ♏ij.
Potass. bromid., . . gr. xv.
Chloral. hydrat., . . gr. v.
Aquæ, . . q. s. ad f℥j.
M. Dose: One drachm.

TABLET "NEURALGIC."

℞ Quin. sulph., . . . gr. ½.
Morph. sulph., . . . gr. $\frac{1}{10}$.
Strychn. sulph., . . . gr. $\frac{1}{120}$.
Acid. arsen., . . . gr. $\frac{1}{80}$.
Ext. aconit., . . . gr. ¼.
Sig.: One tablet, repeated in one hour.

MIST. POT. IOD. ET COLCHICI.

℞ Pot. iod., ... gr. vj.
Tr. cimicif., . . . ♏iv.
Tr. opii camph.,
Vin. colchic. rad., . āā ♏v.
Aq. cinnam., . q. s. ad f℥j.
M. Dose: One drachm.

SOL. PHOSPHORI, THOMPSON.

℞ Phosphori, ... gr. j.
Alcohol. absolut., . . f℥v.

Dissolve with the aid of gentle heat, and add, previously heated:—

℞ Glycerin., ... f℥iss.
Alcohol., ... f℥ij.
Sp. menth. pip., . . f℥j.
M. Dose: Twelve minims. One drachm contains $\frac{1}{20}$ grain phosphorus.

TABLET "SCIATIC."

℞ Tr. colchici,
Tr. cimicifug.,
Tr. aconit.,
Tr. belladonn., . . āā ♏¾.
M. One tablet.

MIST. SODII SALICYLAT.

℞ Acid. salicylici, . . . gr. x.
Sodii bicarb., . . . q. s.
Extr. glycyrrh., . . . gr. iij.
Glycerin., ... f℥ss.
Aquæ, . . q. s. ad f℥ij.
M. Dose: Two drachms.

MIST. SEDATIVA.

℞ Morph. sulph., . . . gr. $\frac{1}{48}$.
Acid. hydrobrom. dil., . ♏viiss.
Sp. chloroform., . . ♏v.
Syr. scill., ... ♏xv.
Syr. tolutan., . q. s. ad. f3j.
M. Dose: One drachm.—From Allen Starr's "Familiar Forms of Nervous Diseases."

CAPSICUM ANNUUM.

According to the St. Louis Polyclinic, to prevent the blood from settling under a bruise, there is nothing to compare with the tincture or a strong infusion of capsicum annuum mixed with an equal bulk of mucilage of gum-arabic, and with the addition of a few drops of glycerin. This should be painted all over the surface with a camel-hair pencil, and allowed to dry on, a second or third coating being applied as soon as the first is dry. If done as soon as the injury is inflicted, this treatment will invariably prevent the blackening of the bruised tissue. The same remedy has no equal in rheumatic stiff neck.

TREATMENT OF PROFUSE MENSTRUATION.

The following prescription, for cases of profuse menstruation, is quoted by the American Practitioner and News:—

℞ Dialyzed ergotin, . . 10 drachms.
Glycerin, ... 5 "
Salicylic acid, . . . 30 "
Distilled water, . . 2½ ozs.—M.

Sig.: One teaspoonful, diluted with three teaspoonfuls of water, to be injected into the rectum after stool once daily.—*Memphis Journal Med. Sci.*, September, 1890.

NEW REMEDY FOR PEDICULI PUBIS.

The treatment of pediculi pubis by the usual blue ointment has so many inconveniences, with its disagreeable application and its toxic after-effects, that the use of the well-known anti-parasitic action of salicylic acid has of late been much extolled. The formula is:—

℞ Salicylic acid, . . . 2 to 3 parts.
Aromatic vinegar, . . 25 "
Alcohol (80 per cent.), . 72 "

The parts are to be rubbed with a piece of flannel wet with the mixture. One application is usually sufficient. Sulpho calcine is also excellent in this trouble, as well as innocent of any irritation in its application.—*Kansas Med. Journal.*

According to La Médecine moderne, M. Brocq. uses a solution of 1 part of corrosive sublimate in 500 parts of vinegar as a lotion for destroying crab lice. It is said that it not only kills the pediculi, but also detaches the nits.—*Weekly Med. Review*, September 20, 1890.

USEFUL FORMULÆ FOR BURNS.

As an application for burns, the following are recommended:—

℞ Salol, . . gramme 1 (15 grs).
Ol olivæ,
Aquæ calcis, . āā grammes 70 (2⅓ oz).
M. Sig.: Apply on cloths.—*Deut. Med. Zeit.*

℞ Tannin, ... gr. xv.
Alcohol, ... ♏ xv.
Ætheris, ... 3jss.

M. Sig.: Apply; repeat two or three times a day.—*Ibid; Weekly Med. Rev.*, August 16, 1890.

As an external application in acute rheumatism, a writer in the London Medical Record suggests the following:—

℞ Salol,
Ætheris, . . . āā p. vj.
Collodii, ... p. xxx.—M.
—*Canada Med. Record*, July, 1890.

PILOCARPIN IN CHRONIC RHEUMATISM.

Charles Hochalt reports the following case in the Orvosi Hetilap: Mary Molnar, aged 45 years, cook, had two attacks of acute articular rheumatism during the last three years. On admission to hospital, wrists, elbows, knees, as also joints of the feet and hands of patient were painful, and almost completely ankylosed. None of the joints except the elbows showed any structural change. The latter were enlarged and crepitant. Muriate of pilocarpin, in 2-per-cent solution, was used hypodermically at intervals of three or four days, in doses of from 1 to 2 centigrammes ($\frac{1}{7}$ to $\frac{1}{3}$ grain).

A change for the better soon came, and after the ninth injection the stiffness of the wrist and fingers was relieved, and the patient was able to walk about. The elbow-joints, however, failed to show any change.—*N. Y. Med. Rec.; Weekly Med. Rev.*, August 16, 1890.

THE EFFECTS OF DIURETICS.

Several St. Petersburg degree theses this year deal with the subject of diuretics and their effects. Dr. Alexêeff finds that digitalis increases the excretion of water by the kidneys, but lessens that by the skin, the ratio of the

total quantity excreted to that absorbed not being increased, and the effect of nitrate of potash being much the same. Both these substances, too, raise the blood-pressure. Dr. Atlasoff, who has examined the effects of diuretics on the metamorphosis of potash, soda, lime, and magnesia, finds that both digitalis and nitrate of potash increase the metamorphosis of soda in the body and its excretion by the kidneys, its absorption being promoted by digitalis and sometimes by nitrate of potash. Digitalis increases both the absorption and metamorphosis of potash, but nitrate of potash, though it slightly increases the absorption, diminishes the metamorphosis. Digitalis and nitrate of potash somewhat diminish the absorption of lime, the former increasing and the latter decreasing the metamorphosis. The excretion of magnesia by the kidneys and its metamorphosis are somewhat lessened by digitalis, but are generally increased by nitrate of potash, its absorption being promoted by nitrate of potash and usually retarded by digitalis. Dr. Bêlkoff finds that the metamorphosis of chlorides, phosphates, and sulphates is promoted both by digitalis and by nitrate of potash, the former drug exerting its effects for some time after the day of its administration, but the latter having more transient influence. Dr. Serezhnikoff finds that digitalis, when it has any effect on the nitrogenous metamorphosis, tends to increase it. It always, however, improves it qualitatively,—that is, increases the metabolism.—*London Lancet; Amer. Pract. and News*, August 2, 1890.

CONSTIPATION IN WOMEN.

Dr. Lutaud recommends the following in obstinate constipation occurring in women:—

℞ Citrate of iron and ammonium,	31 grains.
Fl. ext. cascara sagrada,	32 minims.
Saccharin,	8 grains.
Water,	2½ ounces.

—*Medical News; Indiana Medical Journal*, August, 1890.

TREATMENT OF SMALL-POX.

M. Galewouski, of Paris, reports that in the small-pox hospital at Brunn, in Austria, baths colored red with permanganate of potash are used for the treatment of small-pox. It is stated that after a short stay in the bath the temperature of the patient falls materially, his general health is improved, the pustules are resolved, and recovery sets in.—*Medical Press and Circular*, July 23, 1870; *Therapeutic Gazette*, August 15, 1890.

OINTMENT FOR PITYRIASIS VERSICOLOR.

℞ Acid salicylic,	1 drachm.
Precipitated sulphur,	5 drachms.
Vaseline,	3 ounces.

Make into an ointment, and before using place the affected part in hot water for several hours, adding one ounce and a half of powdered borax to each gallon of water used. The skin should be well dried before the salve is applied.—*L'Union Médicale; Medical News*, August 23, 1890.

ANTIRHEUMATIC FRICTIONS (P. BOA).

℞ Chloroform,	150 grammes.
Camphor,	30 "
Paraffine, q. s. to make	300 "

—*Revue de Thérapeutique Médico-Chirurgicale; ibid.*

LAXATIVE FOR CHILDREN.

℞ Manna, in tears,	50 parts.
Calcined magnesia,	10 "
Washed sulphur,	10 "
White flour,	30 "

To be made into an electuary, of which a teaspoonful or more may be given, in a cup of weak tea or hot milk.—*La France Méd.; ibid.*

FOR SUPERFICIAL BURNS.

Mr. C. Heath, of London, recommends a mixture of 2 parts of castor-oil and 1 part of collodion.

INTERNATIONAL MEDICAL CONGRESS.—The Americans at the International Medical Congress found the weather in Berlin quite as hot as in their own country, the thermometer registering there, August 4th, a higher temperature than in ten years. These meetings, like our own national meetings, are interesting from a social standpoint, in forming new friendships and renewing and brightening old ones, but it is very doubtful if any new discoveries or any very important lines of thought are brought out. In such a crowd but little attention is given to papers or discussion, but the social element freshens the mind and brightens the life with recollection of men who have become illustrious in the fields of literature and science, and stimulate to more careful work. These meetings are very well in their place, but the real scientific work of our profession will be done at home in private and hospital practice, and in the quiet of the study and laboratory.—*New York Medical Times*, September, 1890.

THE
Medical Bulletin.

JOHN V. SHOEMAKER, A.M., M.D., Editor.
F. A. DAVIS, Publisher.
S. C. BERGER, Business Manager.

Philadelphia, Nov., 1890.

THE MEETING OF THE BRITISH MEDICAL ASSOCIATION.

THE Fifty-eighth Annual Meeting of the British Medical Association was held this year at Birmingham, July 29th, 30th, and 31st and August 1st. The President, Dr. Willoughby Francis Wade, of that city, devoted his address to an important subject,—"The Preliminary or Pretechnical Education of the Medical Student." Since few of these are able to say, with Milton, "I care not how late I come into life so that I come fit," the question of preliminary training is closely related to a wise economy of time and money, as well as to proper mental training for a life-work. Much interest centres in the problem of how much knowledge of the classics, and especially of Latin, should be made obligatory. Few will altogether deny that the dead languages are of value as an educational discipline, to say nothing of the literatures of which they are the keys. But intellectual discipline is equally obtained from a study of mathematics and physical science, while a youth acquires at the same time a store of information which lies at the foundation of his proper professional study. Most, if not quite all, medical literature enshrined in Latin is antiquated and consequently worthless from a scientific point of view, and is only of historical interest. It is worth while, perhaps, to continue the custom of using in our prescriptions the Latin names of drugs, simply that our patients may not entertain any bias of the imagination for or against certain substances, or be encouraged to pick up that little knowledge which is such a dangerous thing. Beyond this, says Dr. Wade, the only uses to which a physician need put his knowledge of Latin consist in writing his instructions to the dispenser and his directions to the patient. The druggist may or may not be able to read his instructions. At all events, his books will furnish him with a translation of the usual expressions. But how shall the mass of patients understand directions written in Latin? For the public the directions should be expressed in the vernacular, as, indeed, is the universal rule in this country. Sir. B. Walter Foster, who delivered the Address in Medicine, discoursed upon the public aspects of our profession, the influence which the theories and discoveries of bacteriology have had on public opinion and legislation, the sanitary achievements of the past, and the needs of the future. The speaker alluded to Pasteur's discovery of the method of attenuating the virus of chicken-cholera, by which Jenner's practice found a parallel; one which, moreover, was repeated when the eminent Frenchman, in 1881, successfully demonstrated the efficacy of vaccination of animals against anthrax. His prophylactic inoculation against hydrophobia depends essentially upon the same biological principles, and the fact that the causative micro-organism of rabies is as yet undiscovered no more militates against vaccination for that disease than vaccination for small-pox, or, possibly, the same procedure as preventive of tuberculosis. Sir Walter quotes the statement of M. Roux: "There is no stronger example of the power of the experimental method applied to medical matters than this one of the prevention of a malady the absolute virus of which is still obscure."*

The Address in Surgery was by Lawson Tait. That it was vigorous and positive goes without saying. He is impatient of a tendency in physiologists to dwell too much upon mere description of experimental apparatus at the expense, as he thinks, of vital knowledge which shall be useful at the bedside. An amusing allusion is made to his presence at a lecture on physiology, which consisted "in an explanation of a brass instrument resembling a model of Clapham Junction, intended to explain something about muscular fibre." He agrees with those who advocate a revival of the apprenticeship system "in such fashion as modern requirements indicate," believing that by the

* Croonian Lecture on Preventive Inoculation, by M. Roux. British Medical Journal, June 8, 1889.

old method a lad unconsciously gained a fund of practical information concerning disease which he misses in the present more theoretical system of education. As an aid to manual skill and ingenuity, the speaker would encourage students of surgery to spend a few hours every week in a carpenter-shop and at the blacksmith's forge. In the latter portion of his address he expresses a desire that different methods of surgery should be more systematically compared as regards results. "Let one set of men work steadily at one method for one class of cases and another set at another method, and the statistical laws will be found faithful to the truth, as they ever are when the figures are large enough." By carrying out such a plan, he conceives that our choice of methods will be rendered more precise. In a brief address, delivered at the opening of the Section of Obstetric Medicine and Gynæcology, Dr. Thomas Savage, in view of the cases of insanity which sometimes develop in connection with disease of the female reproductive organs, spoke of the advantage that exists for most, and certainly all large, lunatic asylums, to have a gynæcologist as a member of their medical staff.

"Therapeutics as an Applied Science" was the title of the Address in Therapeutics, by Dr. W. H. Broadbent. In the production of vital phenomena, he remarked, chemical and physical laws are not suspended or reversed. The conditions under which they operate are changed, and their affinities have a wider and more varied field of action. The cell activities in different classes of animals are differently related to organic and, perhaps, to inorganic substances. Therefore, the results of experiments upon rabbits do not necessarily apply to cats or dogs, much less to human beings. The lecturer pointed out that merely to reduce fever by some powerful drug does not necessarily relieve the disease. In hyperpyrexia, the restoration of the control of the nervous system over the temperature is effected by the general cold bath or affusion, when a graduated bath will be utterly useless. The new and powerful antipyretics are ultimately destined to render great service in the treatment of disease, besides throwing light upon the heat-forming and heat-regulating processes. At the present time, however, he thinks that they are doing harm as well as good, and has seen nothing but harm from their continued use in typhoid fever. He deprecates, therefore, their indiscriminate employment, though in pneumonia, antipyrin, given in repeated doses soon after rigors occur, sometimes appears to cut short the attack. In the study of physiological effects, it is not enough to establish the fact that curare, muscarin, and belladonna, for instance, act upon the nerve-endings, morphine on the cerebral cortex, and strychnine on the motor cells of the anterior cornua of the cord. We wish to learn, if possible, how the effects are produced. We may assume that they are produced by chemical action.

Dr. Broadbent believes that similarity of chemical composition is accompanied by similarity of physiological and therapeutical effects, or, if any difference exist, the diversity must be capable of explanation on chemical grounds. There must also be a quantitative relation between the drug and its effects and a dynamic explanation of such effects. A beautiful illustration of the modification of physiological action, according to varying chemical composition, is afforded by the three related substances,—xanthine, theobromine, and caffeine. The last two compounds are derived from the first by the substitution of methyl (CH_3) for hydrogen in the xanthine molecule. Two atoms of hydrogen being replaced by methyl, the result is theobromine or dimethyl xanthine; the substitution of three atoms of hydrogen produces caffeine or trimethyl xanthine. Xanthin renders the muscles of frogs rigid by direct action on their substance, and at the same time paralyzes the spinal cord. The substitution of methyl weakens these effects, theobromine having a similar but less powerful action; while the weakest of the three is caffeine. The tetanus of muscle and paralysis of spinal cord suggest a similarity of the chemical changes which liberate motor and muscular energy. The effects of substitutive changes upon the action of the morphine molecule have been studied by Drs. Crum Brown, Fraser, Stockman, and Mr. Dott. Certain substitutions produce modification in degree of action, but not in kind. But when the body of the morphine molecule is attacked, as in metho-codeine or

apomorphine, the physiological action is radically changed. The speaker proceeded in his attempt to explain upon chemical principles the action of phosphorus, arsenic, mercury, anhydrous hydrocyanic acid, aconitine, and strychnine. Into further details we may not here enter. The introductory address before the Pathological Section was given by Professor Hamilton, of Aberdeen, his subject being "The Pathology of Gastric Dyspepsia." The recent exact researches of Cohn, von Mering, Ewald, and Boas upon normal stomach digestion are concisely presented. The chemical changes which lead to acid dyspepsia having been indicated, the lecturer proceeded to describe the method by which we are enabled to quantitatively estimate the acid present at various stages of the digestive process. Dr. Frederick Needham spoke before the Section of Psychology, while Otology was represented by Dr. Charles Warden and Laryngology and Rhinology by John St. Swithin Wilders.

THE MECHANISM OF INFECTION.

ONE of the most learned, ingenious, and valuable of the addresses delivered before the late International Congress was that by Professor Bouchard, of Paris. Of the eight different processes by which it has been thought that the animal tissues were able to protect themselves against the action of bacteria, he dwelt upon but two as being efficient, viz., phagocytism and what he has denominated the bactericidal condition. In the former cellular activity prevents the development of microorganisms; in the latter a chemical condition is induced, which not only destroys the microbes, but retards their growth and multiplication, reduces their nutrition, and weakens their functions. Phagocytism is a general and universal process, a constant function during health. The bactericidal condition is accessory and contingent. Neither, taken by itself, is capable of preserving or restoring the integrity of the economy. It is, in general, by the concourse and association of the two processes that immunity is assured and cure produced. In vertebrate animals local injury excites an accumulation of those cells capable of migration,—the white blood-corpuscles and the leucocytes of the lymph. By the side of this pathological diapedesis of white blood-cells there is constantly taking place a normal migration of lymph-cells toward the surface of the internal integument. This occurs especially in those places where microbes are able to penetrate an intact membrane, as in the pulmonary alveoli, the tonsils, and Peyer's patches. Now, even in health microbes do succeed in passing these boundaries, but they are immediately enveloped and destroyed by the lymph-cells. Hence, although these organisms abound in the respiratory and digestive tracts, they are, in normal conditions, prevented from entering the blood. The normal blood, as Pasteur has asserted, contains no bacteria; but Professor Bouchard has seen them rapidly make their appearance in the blood of healthy animals when those are exposed to the action of causes which induce the development of infectious disease in man. The prolonged action of a moderate degree of cold is one of the commonest of these causes, and in animals subjected to such influence for a few hours the presence of bacteria in their blood could be demonstrated by culture. It follows that inhibitory nervous influences embarrass normal phagocytism. A temporary suspension is followed by the passage of microphytes from the lung, pharynx, or intestine into the blood. In a corresponding manner the same influences restrain the pathological phagocytism with which the white blood-corpuscles are concerned. Phagocytism, consequently, whether under normal or pathological conditions, is one of the manifestations of *vis medicatrix naturæ*.

Very slight differences of chemical composition in inert media suffice to render the growth of microbes more or less active. This consideration helps us to comprehend that differences in the composition of the humors of living animals may produce the same results. Thus, for purely chemical reasons, bacteria may be destroyed, dissolved, or inhibited in development; on the other hand, their activity may be greatly heightened, while between these two extremes every grade of variation may occur. A certain number of these results have been obtained by the culture of pathogenic bacteria in animal fluids which have been entirely free from cells. It has been observed

that the blood of an animal naturally resistant to a certain microbe may, nevertheless, serve as an excellent culture medium for that very microbe. Moreover, the blood of an animal which is unresistant to a certain microbe may prove destructive to that microbe. These paradoxical facts prove that natural immunity does not depend upon the bactericidal condition, and that receptivity is not linked with the absence of that condition. It is with acquired immunity that the bactericidal condition is concerned. An infectious malady, when not fatal, produces at the same time immunity and a durable modification of the fluids, which it renders bactericidal; that is, capable of producing, if cultivated, an attenuation of a microbe of the same species which gave rise to the disease. This bactericidal condition does not depend upon the cells which may be present in the fluid. As regards five microbes it has been demonstrated that vaccination produces the bactericidal condition.

Bacteria act upon animals by means of the substances which they secrete. The intensity of the chemical action is proportional to the quantity of chemical substance produced. This quantity may be considerable owing to the immense rapidity with which bacteria multiply. There are now known eight physiological properties belonging to bacterial products, by which pathogenic microbes can influence animal bodies.

Œdema and suppuration resulting from exudation and diapedesis are the expression of vascular reaction, but this reaction is not, according to Professor Bouchard, the direct result of the chemical action of the bacterial products upon the vessel. It is due to an active vascular dilatation, which places the vessels in the condition studied by Cohnheim as the stage preliminary to diapedesis. In the case of those diseases which develop without any local excitement at the point of introduction, the probable explanation is that their specific microbes secrete irritant matters, but that they also secrete a matter which prevents the occurrence of diapedesis. Such matter acts by paralyzing the vasomotor centre. Therefore, while bacteria generate substances capable of producing local irritation, the vasodilator paralysis induced by another secreted product prevents the occurrence of local inflammation, and particularly vascular dilatation, exudation, and diapedesis. For this reason they are unchecked by phagocytism, and left free to develop, multiply, and secrete. In addition, however, to these noxious materials produced by bacteria, others are formed which are useful to the infected system. Such are the vaccine elements of bacterial secretions. The list of these is being constantly enlarged. They are eliminated by the urine, and are not entirely removed prior to the expiration of fourteen days. Their action must necessarily be indirect, because their protective influence does not manifest itself until the fourth day after injection, when a great part of the matter is already eliminated. The immunity which they confer depends, in fact, upon the production of the bactericidal condition. The condition remains after the substance which produced it has passed out of the system. The nutritive type of the animal cells is definitely changed. Immunity is established somewhat slowly. If, when exposed to infection, the fluids are bactericidal, there is no growth, no development of microbes, and no disease excited. If, on the contrary, the fluids are favorable to growth of the microbe, development begins immediately, and the phenomena of disease ensue. If there is no irritation at the point of entrance of the germ the system loses the protective advantage of phagocytism. Fortunately, however, while the bacteria throw deleterious substances into the blood and tissues, they are secreting another substance the presence of which is not revealed for a certain number of days, but which penetrates the cells, modifies their nutrition, and, in fact, establishes the bactericidal condition. At this instant the disease has attained its acme and begins to decline.

We have thought fit to present to our readers the foregoing abstract of the views of the eminent French professor on account of their scope and ingenuity, and the importance of the subject. As he himself remarked at the termination of his eloquent address, they are doubtless not exempt from hypothesis, but he believes that in essential points they rest upon a firm basis of experimental demonstrations.

CORRESPONDENCE.

Editor Medical Bulletin:—

There recently fell into my hands a case of what Erichsen calls "Hydro-sarcocele," marked by so many peculiarities that I have thought it worth reporting. The patient, Geo. Van W., is aged 60. Twenty-five years ago he strained himself while logging, and felt a pain in the left groin. Soon a tumor began to form, and for twenty years it has been troublesome. For ten years it has been very bad, and for two years almost unendurable.

On July 21 I castrated the man and found the following conditions: The scrotum was distended to the size of an adult skull. The hydrocele was encysted in the cord, and contained 12 ounces of fluid. The walls of the hydrocele cyst were nearly as thick as my hand, and were everywhere adherent to the scrotum. The fleshy part weighed 14 ounces. The cord was ligated in mass and cut at the external inguinal ring. The testicle was found buried in the bottom of the mass, and its tunica vaginalis was undisturbed and contained no more than its normal amount of fluid.

The other testicle and cord were inflamed and painful. The pain was reflected to the inside of the pelvis and down to the middle of the thigh. There was an ounce of fluid in this tunica vaginalis. They were likewise removed at the external ring.

This is the second largest hydrocele of the cord on record, so far as I know (see "The International Encyclopædia of Surgery," vol. vi, p. 574).

The patient made a rapid and uninterrupted recovery. He says he has not been so comfortable in body for twenty years as he has been since the first fortnight after the operation. The temperature never rose above 101°.

Histologically I cannot make out the structure. It seems to be made up of inflammatory exudations and hypertrophied connective tissue.

J. N. BRAINERD, M.D.

ALMA, MICH., Aug. 28, 1890.

Editor Medical Bulletin:—

DEAR SIR: As I have received many inquiries regarding my lecture on "Sexual Perversion," announced in your valuable journal, please give notice that I shall be pleased to send a copy to any physician who will inclose stamp for same.

G. FRANK LYDSTON, M.D.

OPERA-HOUSE BLOCK, CHICAGO.

MEDICAL NEWS AND MISCELLANY.

SENN'S work on Surgical Bacteriology has been translated into French by Broca.

THE American Rhinological Association met at Louisville, Ky., October 6, 7, 8, 1890.

DEATH OF DR. J. A. ALLEN.—Dr. J. Adams Allen, Dean of Rush Medical College, Chicago, is dead. He was 65 years of age.

SOAP-MAKERS are experimenting on the electrolysis of sea-salt solutions, with a view of obtaining caustic soda, from which to prepare the soda used in the manufacture of soap.

A RECEPTION was given by Dr. Benjamin Lee, on Thursday, September 18th, at his residence, No. 1532 Pine Street, to the members of the American Orthopædic Association.

DR. HARRY JACOB, a graduate of one of the Philadelphia medical schools, and an active practitioner at Altoona, Pa., was married October 21st to Miss Lotta Rosenfeld, of Boston.

NORWAY SPRUCE twigs, placed in water, in a few days feather out with tender, pale-green branches, soft and cool to the touch, and will fill a room with a delightful, health-giving odor.—*Albany Medical Annals*, September, 1890.

STATUE TO LIEBEG.—At Giessen there was on July 23 unveiled, in the presence of a large assemblage, a monument to this distinguished chemist. The statue is greater than life size, and allegoric figures representing Science and Culture are on two sides of the monument, which is of white marble and is described as a magnificent work of art.—*Pharm. Record*, August 18, 1860.

A NEW medical society has recently been formed in France with the title of "La Société Clinique des Praticiens de France." It is to meet twice a month, and will hold the now inevitable "congress" from time to time, together with an annual dinner. Besides this the society will publish two journals, the Annales de la Société Clinique and the Clinique Francais.—*Amer. Pract. and News*, August 2, 1890.

AN INCORRECT SECRETARY.—Dr. Lassar, the Secretary of the International Medical Congress, is said to have left Berlin for New York to escape the consequences of his rudeness while conducting the Empress through the exhibition. Besides this, his official statements at the last meeting of the Congress now prove to be incorrect. The delinquent doctor's friends excuse him on the ground that his nerves are overstrung, and that, therefore, he is not responsible for his actions.—*Med. Record*, August 23, 1890.

GERMAN POLITENESS.—At the late Medical Congress in Berlin, it is said that papers in the German language only were listened to with attention. During the reading in French or English the members left the meeting or walked about and conversed, causing great annoyance to the speaker and those who desired to listen. In one section the member appointed to read a paper in English refused, saying it would not be listened to, and he did not wish to waste his time. The paper was therefore read by title.—*The Sanitary Era*, August, 1890.

SOLUBILITY OF NEW MEDICINES.—The following table of solubilities of some new medicines may be useful to some of our readers:—

One part of	Water.	Is soluble in Alcohol.	Ether.
Antifebrine,	200	10	10
Antipyrin,	1	1	50
Antithermin,	slightly soluble.	slightly soluble.	slightly soluble.
Cocaine hydrochlor.,	5	10	
Iodol,	5000	3	1
Paraldehyd.,	10		
Pyrodine,	1	1	
Quinoline tartrate,	80	150	
Resorcin,	1	1	
Salol,		5	5
Thallin (sulphate),	7	100	
Thallin tartrate,	10		
Urethane,	1	0.6	

—*Pharm. Record.*

AN eminent Glasgow aural surgeon, Dr. Thomas Barr, has communicated to the British Medical Association some valuable data concerning the injurious effects of railway-whistles upon the hearing. In railway-whistles the arrangement for regulating the pressure of steam passing through from the boiler to the whistle is not usually sufficiently delicate. If the boiler should be under high pressure the whistle is very much louder and shriller than when it is under low pressure. So that when a passenger train is leaving a station for a long run, and having therefore its boiler under high pressure, the whistle is unnecessarily loud and shrill, just when those qualities are least required. Dr. Barr urges upon the attention of the Association the adoption of lower-pitched whistles, with proper regulators, so as to lessen the present jarring of sensitive ears and nerves.

MEASLES DURING PREGNANCY.—Dr. W. B. Deffenbaugh, of Paris, Ark., writes as follows to the editor of the St. Louis Courier of Medicine:—

Dear Sir: The April number of The Courier of Medicine, under Reports on Progress, mentions a few cases of pregnancy complicated by measles. I can give you an additional case: On January 12, 1888, I was called to see Mrs. H., an American lady, aged 27, primigravida; she was in labor, having gone to full term, when I arrived. Labor was tedious, lasting about twelve hours in second stage; tediousness being caused by large size of child.

Mrs. H. had measles at the time, the eruption having appeared the day before I was called to her in confinement. The measles ran their usual course and did not seem to complicate or be complicated by the parturient condition.

The child, when born, was covered by an eruption which was similar to that on the mother in appearance, but had no catarrhal symptoms. Mother and child both did reasonably well.

NAPHTHALIN AND CATARACT.—Dr. Kolinski, writing in von Graefe's Archiv, Band xxxv, 2, points out that naphthalin, which is coming a good deal into use from the powerful effect it seems to have on the micro-organisms existing in the intestines in some cases of diarrhœa, possesses also the property of producing changes in the nutritive power of the blood, thus being liable to set up degeneration of the blood-vessels. As the eye is one of the most highly vascular organs, it is one of the first to show any of the changes induced by interference with the nutritive property of the blood. Naphthalin is said, first, to cause small extravasations in the choroid and in the ciliary body, then ecchymoses and white patches in the retina, and, finally, cloudiness in the lens and crystals in the vitreous.—*Lancet; Memphis Journal Medical Sciences*, September, 1890.

PIGMENTATION OF THE SKIN IN GRAVES' DISEASE.—Dr. R. L. MacDonnell exhibited at the Montreal Medico-Chirurgical Society, May 16, 1890, the photograph of a patient whom he had had under his care in the Montreal General Hospital, a girl aged 21, who for several years had suffered from palpitation on exertion. Six months previously to admission thyroid enlargement had been noticed for the first time. Exophthalmos was not prominent. The remarkable feature of the case was the well-defined brown pigmentation on the upper and lower eyelids which had made its appearance during the last six months, and seemed to have no tendency to spread. The natural complexion of the patient was fair, and the pigmented skin had the appearance of a huge freckle. These patches have been noted in cases of exophthalmic goitre, and universal bronzing has been recorded.—*Montreal Medical Journal*, August, 1890.

AN AUSTRALIAN VISITOR.—In the early part of September we received a call from Dr. Wahab McMurray, of Sydney, Australia.

Dr. McMurray, who has been a practitioner for some years, has recently been devoting his attention to skin and venereal diseases, and in conversation with the doctor we were most agreeably pleased to find the rapid development also of the science of medicine in his adopted country.

The profession are thoroughly informed upon all the recent advances, and are themselves becoming most active in the various special departments.

Dr. McMurray, has received M.Ch. from the Queen's University, Ireland, and L.M. from the King and Queen's College of Physicians, Ireland. He is a member of the British Medical Association, also late Surgeon to Walgett Hospital, N. S. Wales. He will remain for several months yet in Philadelphia, studying skin and venereal diseases at the Medico-Chirurgical Hospital. During the winter Dr. McMurray will visit the great European medical centres, and continue his studies upon the special department, returning to his home in Sydney the latter part of August, 1891. At the large hospitals in Philadelphia, at all times of the year, active practitioners from all parts of the world are to be found availing themselves of the superior advantages of the clinical facilities of this great medical centre in all departments of medicine.

Hernia of the Gravid Uterus.—Dr. Sparling, one of Professor Leopold's assistants in Dresden, gives the notes of a rare and interesting case. The patient, aged 30, III-para, of slight build, entered the clinic on April 2d, 1889, stating that the liquor amnii had come away on 30th March, and that pains had begun the following day. In the middle line, below the umbilicus, was a hernial protrusion of the pregnant uterus, which fell forward, and completely covered the genitals when the patient stood erect. During the uterine contractions, the round ligaments and Fallopian tubes could be distinctly seen through the thin covering of the abdominal integument. The diagnosis was a living child about the beginning of the seventh month, presenting in the first position of the vertex. Labor was tedious, and terminated early in the morning of the 6th April. The child was living, but very weak, and died twenty hours after birth. The hernia took place through the cicatrix of a Cæsarian operation, performed six years previously. Turning had failed to effect delivery, and during the manipulations the child's head had been torn from the body ; the section operation was then performed. After a ten weeks' puerperium the patient recovered. The pelvis was contracted, the conj. vera being 6.75 centimetres (2.66 inches). —*Archiv für Gyn.*, Bd. xxxvii, Heft 2; *Montreal Medical Journal*, September, 1890.

"Midwife's Disease."—Dr. Féré has published in the *Revue de Chirurgie* a "Note on a Professional Affection in a Midwife." In accordance with English nomenclature, the affection may conveniently bear the name at the head of this paragraph. A midwife, aged 35, fatigued herself by supporting the perineum during labor for two hours, using the right and left hand, alternately. A painful swelling of the wrists set in within a few hours, and on the next day marked tumefaction appeared along the outer border of the lower third of the forearms, somewhat posteriorly. This tumefaction corresponded to the course of the sheath of the radial extensors, as is well indicated in a drawing from a photograph appended to Dr. Féré's paper. The patient suffered great pain, and walked with her hands and wrists directed downward, so that on superficial observation it seemed as though she was subject to lead poisoning or some other paralytic disease. After rest and occasional blistering the patient's malady was much relieved. At the end of two months all swelling had disappeared, and passive movements of the radial extensors or voluntary movement without any resisting force were painless. When, however, the patient attempted to lift any weight, the local pain returned at once. The disease was due to a self-evident cause. When supporting the perineum, the patient kept the affected muscles contracted for a long time, so as to extend the hand, in order to favor the action of the flexors of the fingers.—*B. M. J.*, March 29 ; *N. Y. Medical Abstract*, July, 1890.

"The Prescription."—On the first day of January, 1891, the publishers of The New England Medical Monthly will issue a new medical journal of forty-four pages, edited by Dr. W. C. Wile, the popular editor of the New England Medical Monthly, to be called "The Prescription," and which will be devoted entirely to practical therapeutics. The favorite prescriptions of the leading members of the medical profession throughout the world, together with all the valuable prescriptions culled from the medical literature of the universe, will be added. Each month subscribers will have an opportunity to see what is going on in the therapeutic world, and they will have an epitome of this important branch, as from a mirror reflected, and when the year is ended the volume will exceed in value any publication of its kind. Dr. Wile's large acquaintance, both at home and abroad, with the leading minds of the profession, makes him particularly fitted for this task. The price of "The Prescription" will be $1 a year in advance. "The Prescription" and The New England Medical Monthly together for one year, $2.50 in advance. Old subscribers of The Monthly can have "The Prescription" sent to them for one year for 50 cents extra. There will be no medical journal published which will compare in value with "The Prescription," from a therapeutic stand-point. Medical journals there are galore, but none of them pay that attention to the practical application of therapeutic measures that they ought to. This is the main and only

point made by "The Prescription," and we predict for it a value to the busy doctor that will be exceeded by no other medical journal published.

Address all communications to the Danbury Medical Printing Company, Danbury, Conn.

THE CORTICAL MOTOR CENTRE OF THE LARYNX.—Dr. J. Garel and Dr. Dor have recently observed a case which is especially interesting as offering an affirmative answer to the question so long the subject of controversy as to the existence of a cortical motor centre for the larynx. The case is reported in full in the Journal of Laryngology and Rhinology for May, 1890, being that of a man suffering from ulcerative endocarditis with pericarditis, who, three days before his admission to the hospital, had been suddenly attacked with aphonia. On examination, apart from the cardiac symptoms, pulmonary œdema, etc., there was noted complete paralysis of the left vocal cord. Any other traces of paralysis were absent, and the case was, therefore, one of pure laryngeal paraplegia. The patient died three days later, and at the autopsy there was found in the right hemisphere a small centre of softening, triangular in shape, and occupying the upper internal part of the lenticular nucleus, and extending slightly on to the external part of the internal capsule. The author concluded from the examination of these cases, as well as from the records of numerous experimenters, that—

1. There exists a cortical motor centre for the larynx in each cerebral hemisphere.

2. This centre is located at the foot of the third frontal convolution on the fissure which separates it from the ascending frontal.

3. The fibres originating from this centre pass to the level of the external part of the knee of the internal capsule, forming in the geniculate fasciculus a motor laryngeal fasciculus, independent of the fasciculus for aphasia and the hypoglossal fasciculus.

4. The laryngeal centre has a crossed action. Its destruction determines total paralysis of the vocal cord of the opposite side (cadaveric position).—*Therapeutic Gazette*, July 15, 1890.

CONGENITAL DEXIOCARDIA WITHOUT VISCERAL DISPLACEMENT.—Professor Grunmach describes a case of the above, which he maintains to be the first of the kind diagnosed during life, and also established by post-mortem examination. Of the cases hitherto described, some were not observed during life (Meckel, Abernethy, Brechet, Otto, Kundrat), and the rest were diagnosed during life, but not verified post-mortem. In the present case there were defects of the cardiac septum and pulmonary stenosis, and during life peculiar cardiograms were obtained. The case was one of two of congenital pulmonary stenosis with septum defect, of which the cardiograms were shown at the Heidelberg congress last year, the peculiarity consisting in this, that curves of the apex-beat closely resembled radial pulse-curves; and careful examination showed that the first elevation corresponded to the ventricular systole, the second followed closure of the aortic valves, while the third—a very slight one—indicated auricular systole. The patient, a boy aged 15, presented unmistakable physical signs of cardiac displacement, and a loud *bruit* over the second left intercostal space indicated pulmonary stenosis, assumed to be congenital from the gradual development of his symptoms from the second year of life; for the same reason a septum defect was assumed. Arrest of bodily development was an important symptom. The diagnosis ran thus: "*Dexiocardia congenita, sive situs viscerum inversus;* also congenital pulmonary stenosis and defects in the cardiac septum;" and this was fully verified post-mortem. It is surprising that the boy had lived so long, considering that a very fine sound could hardly be passed through the ostium pulmonale. The ductus arteriosus was obliterated. The diseased condition probably began during the second fœtal month.—*British Medical Journal; Am. Pract. and News*, July 19, 1889.

TRI-STATE MEDICAL ASSOCIATION OF ALABAMA, GEORGIA, AND TENNESSEE.—At our first meeting sections of the various departments of the Medical Sciences were created, with the following chairmen:—

Surgery, G. A. Baxter, Chattanooga; Gynæcology, R. J. Trippe, Chattanooga; Obstetrics, W. T. Blackford, Graysville, Ga.; State Medicine, P. D. Sims, Chattanooga; Physiology, W. L. Gahagan, Chattanooga; Otology, R. D. Boyd, Chattanooga; Ophthalmology, N. C. Steele, Chattanooga; Laryngology, Max Thorner, Cincinnati, O.; Psychical Research, J. E. Purden, Cullman, Ala.; Pathology and Practical Microscopy, James E. Reeves, Chattanooga; Meteorology, E. T. Camp, Gadsden, Ala.; Practice, G. W. Drake, Chattanooga; Materia Medica and New Remedies, Junius F. Lynch, Chattanooga.

Members of the Association are requested to report cases or other matters of interest to the chairmen of the various sections, who will report them at the next meeting.

The objects of our Association are, the encouragement of all that pertains to the elevation of the profession, and the furtherance of all measures for the relief of suffering. We aim to draw together those who respect ethical medicine for mutual acquaintance, for advancement in knowledge, and for stimulation to scientific investigation.

Our membership is not restricted to the three States, and all who can should join us in the furtherance of the above objects. By furnishing

proper credentials and remitting one dollar to the Secretary, any physician may be enrolled as a member of this Association.

In due time a circular will be issued, giving full particulars of our next meeting, but at present we feel warranted in promising reduced rates on railroads and at the hotels.

The names of firms who apply for space to make exhibits of pharmaceutical preparations, surgical instruments, or other articles will be published in our next circular. We are already assured of a large number of exhibits.

DR. J. R. RATHMELL,
DR. W. C. TOWNES,
DR. W. L. GAHAGAN,
Executive Committee.

Address all communications to the Secretary of the Association.

AT a meeting of the Clinical Society of London, held April 25, 1890, Mr. W. H. Battle read a paper on Tubercular Ulceration of the Bladder, in which suprapubic cystotomy and scraping were done (Lancet, May 3, 1890) and recovery resulted. The patient was a single girl, aged 20; she had a maternal history of phthisis. For ten months she had some increased frequency of micturition, with some pain before the act; the urine had been thick, and at times had contained blood. On admission to the Royal Free Hospital she was obliged to pass urine every hour and a half, and there was a feeling of fullness and aching pain, which emptying the bladder relieved; urine alkaline, specific gravity 1015, and contained many pus and epithelial cells. Five days after admission the urethra was dilated, and an ulcerated surface of considerable extent felt at the base of the bladder and posteriorly, while on the right side was a pouch. The surface of the ulcerated patch was soft and vascular, with a well-defined mucous margin. Various solutions were used without improvement. On April 3d, after cystoscopic examination had demonstrated that the ulceration was as extensive as at first, the parts were scraped with the finger-nail and Volkmann's spoon, and later an emulsion of iodoform was used after micturition, and a couple of drachms of the emulsion left in the bladder. Other injections were also used without benefit, so on July 29th suprapubic cystotomy was performed; the ulcerated surface was well exposed and scraped with a sharp spoon, and afterward daubed over with a solution of zinc chloride 30 grains to the ounce. A catheter was passed into the bladder and a drainage-tube into the wound. The drainage-tube was removed August 3d, and the catheter removed on the 10th. She was about on August 31st, and discharged from hospital September 20th. She was seen again April 8, 1890, and was then in good health, having been able to work since leaving the hospital. She could retain her urine for three hours, but had to get up several times during the night.—*Montreal Med. Journ.*, June, 1890.

TABLE DENOTING THE NUMBER OF DROPS CONTAINED IN A GRAMME.—In view of the agitation in favor of the adoption of the metric system in pharmacology and the certainty of its ultimate acceptance, the following, showing the number of drops of various drugs contained in a gramme, will therefore be of value:—

Acid, acetic, dilute, 20.7; acid, bromhydric, 13.8; acid, carbolic, liquid, 27.4; acid, hydrochloric, 14 6; acid, lactic, 24.6; acid, nitric, 16; acid, phosphoric, 13.2; acid, sulphuric, dilute (1:5), 14.5; alcohol, absolute, 39 8; alcohol, dilute, 30.1; alcohol, nitroso ether, 37.2; amyl, nitrite of, 41.4; bitter-almond water, 21.5; chlorine water, 14.9; chloroform, 35.5; creolin, 29.1; creasote, 26.2; ether, acetic, 40.8; ether, sulphuric, 51.3; ethylene, chloride of, 31.7; essence of eucalyptus, 33.7; essence of peppermint, 32.6; essence of turpentine, rectified, 33.7; extract of belladonna, solution of, 27.9; extract of cascara sagrada, fluid, 29.8; extract of hyoscyamine, 33.8; hypnone, acetophenone, 23.4; ichthyol, 30.2; mercury, peptonate of, 14.8; mercury, solution of formamide of, 13; oil of almonds, ethereal, 22.5; oil of cloves, 28.6; oil of croton, 30.8; oil of mustard, ethereal, 29.2; paraldehyde, 36.7; quinoline, 21.6; solution of acetate of ammonium, 30.2; solution of ammonia, simple caustic, 15.5; solution of iron, acetate, 16.7; solution of iron, perchloride, 13 6; solution of iron, potassic arsenite, 18.8; solution of lead, subacetate, 13.5; tincture of aconite, 35.1; tincture of benzoin, 36.8; tincture of cascara sagrada, 29.6; tincture of castor canadensis, 36.2; tincture of colchicum, 35.1; tincture of digitalis, 34; tincture of hellebore, 32.7; tincture of iodine, 39.2; tincture of ipecac, 34.4; tincture of iron, acetate (ethereal), 28; tincture of iron, maltate, 19.6; tincture of musk, 29.6; tincture of nux vomica, 34.6; tincture of opium, benzoic, 33.4; tincture of opium, simple, 28.4; tincture of quebracho, 34.5; tincture of quinine, compound, 33.1; tincture of strophanthus, 34.8; tincture of valerian, 31.4; water, 13.6; wine of antimony, 29.6; wine of ipecac, 22.9.—*Journal de Médecine de Paris*, June 22, 1890; *Therap. Gaz.*, Aug. 15, 1890.

TIRARD: THROMBOSIS OF THE CEREBRAL SINUSES FOLLOWING OTORRHŒA.—(The Lancet, January 18, 1890.) The patient was 4 years of age, had had no previous illness until three months before, when a slight discharge was noticed from the left ear. Following this the child had measles. From that time he lost flesh and strength. Just previous to coming under observation he had had several severe convulsions, had been stupid, and had not spoken or taken notice of his friends.

On examination, he was emaciated, tongue foul, teeth covered with sordes, bowels constipated. He was semi-conscious and occasionally had slight convulsions, in which the left arm was chiefly affected. There was no drawing of the face; the pupils were equal; there was no squinting, no retraction of head, and no tenderness.

The patellar and plantar reflexes were present, equal and normal. There was no anæsthesia or analgesia. *Tache cérébrale* could easily be shown. There is a purulent discharge from the left ear. The urine contains a trace of albumen.

Following this there were several convulsions and a steady rise of temperature for two days. Then there was a surprising return of consciousness. Examination of the chest showed dullness and crepitation over base of left lung.

One week after admission the mouth was noticed to be drawn to the left.

Trembling of the left hand resembled the oscillations of paralysis agitans rather than the wide-jerking movements of chorea. When the child was lying undisturbed these tremulous motions ceased, but became exaggerated when the limb was raised and were then accompanied by tremulous movements of the face.

Death occurred three weeks from date of admission.

The post-mortem showed thrombosis of the cerebral sinuses.

There were numerous small abscesses in the lungs, apparently from infarctions.

The longitudinal and lateral sinus contained well-marked, decolorized thrombi. In the latter they were soft; in the former firm. There was pus in the left tympanum and in the mastoid sinuses. There was no perforation of the membrana tympani, and there was no necrosis of the petrous bone.—*Archives of Pediatrics*, September, 1890.

Idiocy of the Myxœdematous.—Bourneville has written an extensive paper on the above subject, and winds it up with the following reflections, which contain the pith of the whole matter, and are a general commentary on a case which he had under his care in last February: (1) The very incomplete facts which we possess about the family and personal antecedents of the malady do not throw any light upon its cause. We can alone recall the existence of tuberculosis in the father, a brother, and a sister. (2) In this case, the same as in others such, the first symptoms of the pachydermatous cachexia and the congenital absence of the thyroid gland were observed to be at about 3 years of age. It was thought on inquiry that it was possible that the appearance of the pachydermatous cachexia was retarded by the milk-food, and that it manifested itself in proportion as the infant was submitted to ordinary food. A precise knowledge of the physiological action of the thyroid gland is alone capable to solve the question. (3) We think it superfluous to notice each of the symptoms of myxœdema. They are all recognized here: general aspect, conformation of head, hairy condition of skin, brownish-red hair on head, eczema, persistence of the fontanelle; puffing up and œdema of the eyelids, cheeks, hands, and feet, etc.; absence of thyroid gland, increased violence of abdomen, umbilical hernia, absence of sexual appetite, clumsy walk; dull, special appearance; voice harsh, sharp; disagreeably obstinate constipation, arrest of development of generative organs. (4) We notice, as well as the peculiar shape, the existence of other maladies, of scrofulous lesions and rachitic deformities. The vertebral column and the limbs showed complications. How much the attack originally arose from nutrition by the absence of the thyroid gland interested us above all. (5) All the myxœdematous idiots which we have observed presented the same appearance,—stupid, heavy, and without expression. These are not utter idiots. Speech, more or less imperfect, exists in different degrees. It is the same with the memory. The attention, also, is able to be fixed. The comprehension is slow, but not absent. Also, these patients are capable of a certain education; all come to proper sense, are able to eat alone; a few are able to wash themselves, to clothe themselves, to sew, and to assist in the affairs of housekeeping. (6) The treatment which we have instituted in this class of cases consisted in the application of special methods of education for the backward infants, and in tonics, antiscrofulous remedies, salt baths, douches, and gymnastics.—*Lond. Med. Record*, June; *N. Y. Med. Abstract*, July, 1890.

Brain Grafting.—W. Gilman Thompson, M.D., in N. Y. Med: Jour., June 28th. Experiment I.—Two large dogs were simultaneously trephined over the right occipital region; 8 cubic centimetres of brain-tissue were excised in one piece and exchanged; the piece from dog A was put into the opening in the brain of dog B, and *vice versâ*. On the third day both dogs were killed; the transplanted pieces of brain-tissue looked normal, and in each case they were so adherent and firmly covered with fibrous exudation that it was impossible to pull them off with forceps without laceration. Total blindness of the eye opposite the lesion resulted in each dog, as was expected. Experiment II.—A cat and a dog were simultaneously trephined, and 3.5 cubi centimetres of brain-tissue were removed from the dog's left occipital region and transplanted into an opening of the same size in the cat's left occipital region. Three days later the cat was killed. The transplanted dog's brain was found where it had been placed, firmly adherent to the

cat's brain by a layer of fibrin, which varied from ¼ to ½ inch in thickness. The cat was, of course, totally blind in the right eye. Experiment III.—Another cat and dog were simultaneously trephined; 4 cubic centimetres of brain-tissue were excised from the dog's right occipital region and replaced by an equal quantity of cat's brain from the same region. On the fourth day the cat's brain was found adherent to the dog's by a layer of fibrin. Experiment IV.—A ½-inch trephine was used, and a button of bone was cut nearly through over the left occipital region, leaving a small attached margin so that the button could be elevated and then depressed like a little trap-door. Through the opening 2 cubic centimetres of brain-tissue were removed. A cat was simultaneously trephined, and ½ cubic centimetre of brain from her left occipital region were transferred in eight seconds to the opening in the dog's brain. The trephine-opening was closed by the button, and the wound, which had been opened under careful antisepsis, was closed and dressed with layers of antiseptic gauze wet with thick collodion, which is the only practical dressing for brain operations on dogs, because they cannot tear it off. The dog was totally blind for the eye opposite the lesion, and so remained until his death. He was very feeble for a few days, and had to be fed by nutrient enemata. Subsequently he appeared normal in every way, excepting the loss of vision. He was killed at the end of seven weeks, when the piece of transplanted cat's brain was found firmly adherent to the dog's brain, with the pia mater intact. The features of interest of this experiment are the facts that: 1. There is complete union, through organized connective tissue, of the contiguous portions of the two brains. 2. After seven weeks the cat's brain still maintained enough vitality to be distinctly recognized as brain-tissue. 3. Brains of animals of two very different species were thus made to unite. 4. The cat and dog pias present perfect union as well. 5. There is a sympathetic degeneration of the corresponding convolutions upon the opposite side of the dog's brain. For this curious fact I cannot account. I have never noticed it before, in as many as fifty operations upon this region of the brain of cats and dogs, although I have sometimes seen removal of a part of the occipital region result in extensive softening of the entire hemisphere of the same side. The opposite degeneration in this case may possibly be a mere coincidence; if so, it is a very unusual and remarkable one. There was no meningitis to favor it. 6. There was descending secondary degeneration of the dog's brain on the side of the graft, as is usual in cases of simple excision of brain-cortex; hence the cat's cortex had not succeeded in acting as a nutrient for the dog's brain. I think the main fact of this experiment—namely, that brain-tissue has sufficient vitality to survive for seven weeks the operation of transplantation without wholly losing its identity as brain-substance—suggests an interesting field for further research, and I have no doubt that other experimenters will be rewarded by investigating it.—*New York Medical Abstract*, July, 1890.

BOOK REVIEWS.

Transactions of the Michigan State Medical Society. Twenty-fifth Annual Meeting, held in Grand Rapids, June 19 and 20, 1890. Detroit: O. S. Gulley. Bowman & Co., printers.

The annual volume issued by the Michigan State Medical Society has been ably edited by Dr. Charles W. Hitchcock, of Detroit. The association have honored their President, Dr. George B. Frothingham, by placing his steel-engraving in the front of the Transactions. In this same connection we might add that the President in turn has honored himself and the association he so well represented by giving in his annual address excellent advice as to the need of extensive organization as a means of promoting professional interest. The remaining portion of the book is made up of good original papers from some of Michigan's best physicians.

Ointments and Oleates, Especially in Diseases of the Skin. By JOHN V. SHOEMAKER, A.M., M.D. Second edition, revised and enlarged. Pp. 273. 12mo. Philadelphia and London: F. A. Davis, 1890.

When any book, with few exceptions, comes to a second edition it must be worth something—it may be worth a good deal; the latter is what ails this book. As is well known, the author has devoted much time and trial to the oleates in skin affections, and those who have been worried over disorders of the integument will remember what an advance was made in handling these stubborn affections, when Dr. Shoemaker's work came to be a part of their armamentarium. The whole subject of oleates is the practical result of the author's labor, for we knew literally nothing about them in their practical aspect till he worked the problem out for us. In addition to the oleates, the consideration of the entire line of official and unofficial ointments is taken up, and this not alone as to those of this country, but of France, Germany, Austria, Italy, Spain (not Jersey), and the Spanish colonies. If anything concerning anything in this line is sought for as an item of knowledge, it will be got in this book; if it isn't here, it isn't worth looking for. The work is worthy of a place in any library, and to the dermatologist it is a necessity.

It is hardly worth saying that the mechanical construction of the book is all that can be desired—that goes without saying when Mr. Davis is the publisher; in its paper, typography, and arrangement it is elegant. The index is unusually full, and (though it seems queer to leave this observation to the last) there is a lot of information concerning ointments in the past ages of medicine that will prove a curiosity to anyone who wishes to know what our progenitors in the Arte Medica thought of topical applications.

W. R. B. BLACKWOOD, M.D.

No. 7 in the Physicians' and Students' Ready Reference Series. Epilepsy: Its Pathology and Treatment. Being an Essay to which was awarded a purse of four thousand francs by the Académie Royal de Médecine de Belgique, December 31, 1890. By HOBART AMORY HARE, M.D., B.Sc., Clinical Professor of the Diseases of Children, etc. Philadephia and London: F. A. Davis, publisher, 1890.

The author of this unusually good essay, arranged in book form, has given a most thorough account of this important disease. From the definition, which is well expressed, to the pathology and treatment, Dr. Hare has so skillfully handled his subject as to make it most interesting. In discussing the pathology Dr. Hare offers many very original views, which no doubt were some of the principal reasons for the distinguished medical body in Belgium awarding him the well-deserved and merited prize.

We may here quote some of the very strong points in the portion devoted to pathology. For example, the author adds, with a vigorous argument previously expressed, that cerebral anæmia produces convulsions; but though all this work has been done, it in no way proves that cerebral anæmia is the cause of epilepsy. After many able remarks upon this topic, the author states most correctly that the whole theory that epilepsy is due to cerebral anæmia because epileptiform convulsions occur on its production is a species of reasoning entirely unjustifiable and quite absurd, and is harmful because it blinds good investigators so that they seek no further for an explanation.

The portion of the book devoted to treatment is equally as interesting as that upon pathology. A good rule laid down in the treatment of epilepsy, and it would be well if the practitioner would very often think of it when prescribing, is as follows: The treatment is governed largely by the cause and is medicinal or operative, according to the etiological factors at work. Continuing, Dr. Hare points out that the most useful drug for epilepsy is bromide of potassium. The author attaches no value to the use of electricity, but some as to the diet, concluding, however, that very few researches of a thorough character have ever been carried out on a large scale to determine the foods which may or may not be ingested.

A Text-Book of Practical Therapeutics, with Especial Reference to the Application of Remedial Measures to Disease and their Employment upon a Rational Basis. By HOBART AMORY HARE, M.D. (University of Pennsylvania), B.Sc., Clinical Professor of the Diseases of Children, and Demonstrator of Therapeutics in the University of Pennsylvania, etc. Philadelphia: Lea Bro's & Co., 1890. Cloth, 8vo, pp. 632.

The author of this latest addition to the number of our therapeutic text-books has succeeded in presenting an interesting and useful *résumé* of modern practice of medicine and pharmacology, if not quite complete or compendious. After a brief introduction, containing general therapeutic considerations, the materia medica is taken up, the drugs being discussed singly in alphabetical order, mainly by their English synonyms; in view of the difficulties of classification the usual arrangement has been abandoned. Remedial measures other than drugs follow, and a few pages are devoted to foods for the sick. Part IV is principally taken up with a consideration of diseases. This is the least satisfactory and least systematic portion of the work, as many symptoms (dropsy, headache, etc.) appear as diseases, and many diseases (phthisis or delirium tremens, for example) are not treated at all. It is unfortunate that the author has not sufficiently indicated, throughout the work, which drugs are officinal in the United States Pharmacopœia, so as to readily distinguish them from those which are not. The source of acacia is not *A. vera* but *A. verek*, according to the U. S. Pharmacopœia. This might pass as an oversight in proofreading were it not that Wood and Bartholow have fallen into the same error, although the United States Dispensatory of Wood, Remington and Sadtler states it correctly, and gives the description of the two species, *A. vera* and *A. verek*, and their points of difference.

If we have thought it proper to point out some minor faults in this work, it is not in the spirit of hypercriticism, but solely from appreciation of the value of this publication to the student and practitioner of medicine. In another edition these will disappear, as they and some others which it is needless to specify are evidently the result of demands upon the author to furnish "copy" by a specified time when he has been pressed by other work. The therapeutical teachings are clear and conveyed in a familiar style, and not cumbered by many citations from other authors, or by too technical treatment. In some places we are reminded of J. Milner Fothergill's Hand-Book of Practice, as the manner of en-

gaging attention and impressing the convictions of the writer upon the reader are very similar. This is the kind of a book to be digested; and if such a process could be made a part of the experience of every student of medicine prior to his graduation, and he should profit by it afterward, there would be less need for agitation concerning higher medical education in this country in the near future than there has been in the past.

Annual of the Universal Medical Sciences. A Yearly Report of the Progress of the General Sanitary Sciences throughout the world. Edited by CHARLES E. SAJOUS, M.D., and seventy associate editors. Vols. I–V. 1890. Philadelphia: F. A. Davis.

The great task of the well-known editor has again been completed, and he presents in a most complete form the work—with the assistance of his associates in every department of medical science for the past year—in five good volumes. We can but mention a few of the leading contributions and reviews of many of the ablest writers in the medical profession that are included in the books before us. In Vol. I, Prof. James T. Whittaker, of Cincinnati, assisted by Dr. E. S. McKee and H. L. Taylor, reviews all the literature upon diseases of the lungs,—a special department of medicine which now abounds in numerous well-prepared contributions. Among the subjects at this time upon which the physician seeks constant light is tuberculosis, included in this great branch of medicine. In the review Dr. Whittaker and his associates call the attention of the reader to much that is original, much that is of value upon tuberculosis, and we must not omit here mention especially of the observation of this author upon the danger of contracting this disease in railway, especially sleeping, cars. Another topic of much value for all physicians to keep posted upon is syphilis, the literature of which has become enormous; but in this instance it has been carefully and concisely considered by Dr. J. William White, who has also added, by his own contributions, much to this important specialty.

"Diseases of the Brain," by Dr. Landon Carter Gray; "Diseases of the Uterus," by Dr. Paul F. Munde; "Diseases of the Ovaries and Tubes," by Dr. William Goodell; "Diseases of Pregnancy," by Dr. Theophilus Parvin, and the "Dietetics of Infancy and Childhood," by Dr. Louis Starr and Dr. W. M. Powell, are a few of the many very useful contributions to Vol. II. We wish here especially to direct the attention of the reader to the contribution last referred to, upon dietetics for infants and children. The authors have recognized how very important food is to the young, and how much in the way of health depends upon its judicious selection, and therefore included all that has been accomplished in advancing this agent in the treatment of disease.

Vol. III contains the researches that have been made in all the departments of surgery. Research and able views by such distinguished surgeons as Packard, Gaston, Kelsey, Keyes, Sayre, Conner, Stimson, Matas, Laplace, Penrose, Longstreth, Vander Veer, Seguin, McLane Tiffany. All of whom are also authors in this valuable volume.

The specialties of skin, eye, ear, nose, throat, inebriety, and bacteriology are considered, together with diseases of the thyroid gland, legal medicine, urinalysis, and epidemiology, in Vol. IV, by such eminent writers as Oliver, Gould, Turnbull, Sajous, Delavan, Cohen, Ingals, Hooper, Clark, Birdsall, Draper, Allen J. Smith, Ernst, and John B. Hamilton.

In Vol. V general therapeutics, experimental therapeutics, electro-therapeutics, climatology and balneology, medical demography, hygiene, embryology, histology, physiology, and anatomy have received attention by the following well-known authors and clinicians: Griffith, assisted by Cattell; Hare, Ranney, Rohé, Gihon, John B. Hamilton, Kleinschmidt, Guitéras; Sudduth, assisted by Sangree; Frank Brown, Howell, and Forbes.

The general index at the end of Vol. V, which is beyond all doubt the best and most thorough of the kind that has ever been prepared, is by Dr. C. Sumner Witherstine, of Philadelphia, a gentleman who shows his thorough knowledge and systematic training in preparing this able index.

At the end of each volume the publisher has added a new department known as "Medical Polytechnics and Sanatory Supplies." This department includes a very good account of the various business houses that supply the physician's needs. The pages are well arranged, and some of the best firms in the country are represented. At the end is a very useful index of this department, the addition of which is not only of service but of much practical value to the busy physician, who can consult with interest the pages of important addition.

The publisher has not only issued handsome, well-bound, but also books having charts, diagrams, and lithographic plates illustrating the various diseases, which are in themselves worth the price of these very reasonable volumes.

A System of Oral Surgery. Being a Treatise on the Diseases and Surgery of the Mouth, Jaws, Face, Teeth, and Associate Parts. By JAMES E. GARRETSON, A.M., M.D., D.D.S., President of the Medico-Chirurgical Hospital, and Emeritus Professor of Oral Surgery and General Clinical Surgery in the Medico-Chirurgical

College; Dean of the Philadelphia Dental College; Surgeon in Charge of the Hospital of Oral Surgery; Member of the Philadelphia County Medical Society, etc. Illustrated with numerous wood-cuts and steel-plates. Fifth edition, thoroughly revised, with additions. Philadelphia: J. B. Lippincott Company. London: 10 Henrietta Street, Covent Garden, 1890.

A work that has reached the fifth edition of over thirteen hundred pages means one that has been well received. It clearly demonstrates that the teaching and writings of the author have been most successful. One needs only to glance at the table of contents, which includes seventy-eight chapters, to observe the great extent of the work and the large amount of material the author has placed before the reader. From the first chapter, which treats in a most admirable manner of the descriptive and surgical anatomy of the head, until the last on antisepsis, which is most interesting, the author gives not only a thorough but a practical account of this important specialty. It would not be possible for the writer to even give the reader an outline of the succeeding chapters on muscles, arteries, veins, nerves, and lymphatic vessels and glands, without devoting many pages to the practical views set forth by the author. Professor Garretson gives ideas based upon a large clinical experience and many years spent in careful study and practice upon oral surgery

The teeth and their diseases, and especially the surgical consideration of dental caries, are subjects tersely and most practically treated, and must be of the utmost value to physicians, surgeons, and dentists. One topic, however, which is of great value, is stated with such clearness as to call for special mention. We refer to exsection of the maxillary bones. The many medical and dental students who annually attend Professor Garretson's clinics, and who have so often witnessed the operation on the maxillary bones, will attest to the good results from following the rules laid down for the treatment of these parts in this work. The author here carefully conducts the reader step by step into all the necessary requirements for this operation upon these bones.

The use of the surgical engine in the operation for exsection of the inferior maxillary bone, introduced and perfected by Professor Garretson, is demonstrated on pages 1072 and 1074 with simple but most thorough text and fine cuts, showing the instrument as well as its employment. In speaking of the surgical engine in oral practice, Dr. Garretson says it is a convenience above praise. By means of the capability furnished by the apparatus operations of magnitude and danger are accomplished with all ease and at greatly diminished risk. Instruments are used with the engine precisely as one handles a pen, saw, bur, or drill, slipping, by means of a shank, into a hand-piece or handle, and made to perform revolutions to the extent of several thousand to the minute, while at time of greatest movement a thumb and two fingers controls the cutting tool with all the facility of an act in drawing.

Another valuable and interesting subject, nerve-lesions proper and their treatment by section, is treated of in Chapter LXV. The author gives very fully in this portion of the work the various operations for nerve-lesions proper. The one that appears to the writer to be the simplest and best to perform for the second branch of the fifth nerve is that recommended by the author. This operation is thus clearly and graphically described: Place the patient on a pallet and etherize; next, expose the anterior face of the antrum by a trap cut in the cheek, which trap is to open toward the eye, and is to hold the branches of the infra-orbital nerve, which nerve is to be dissected out of the flap and held in the grasp of a forceps out of the way. Hæmorrhage being controlled by ligatures, styptics, or other means, the face of the antrum is cut away by use of bur revolved by the surgical engine. With the nerve secured as directed for a guide, the floor of the infra-orbital canal is cut away and the nerve followed to and along the floor of the orbit. The posterior wall of the antrum reached, the bur is passed backward through it, the nerve still being preservad intact. A succeeding step removes, by means of the bur, such extent of the posterior wall as exposes the spheno-palatine fissure. At this point the branches relating to Meckel's ganglion are met. Here the fenestrated instrument has the nerve slipped through it, and, being pushed back until meeting the obstruction, the curved blade is, in turn, directed back of it and over the Meckel branches, when, the foramen being reached, the nerve is cut off. In performance of this operation, great care is required to avoid cutting the nerve prematurely by the rapidly-revolving bur.

The above is one of the many instructive operations recommended by the author through the work. This system of oral surgery is beyond all doubt the most complete work in the world. It gives the physician, dentist, and student the practical experience of the first special worker in this department. Throughout the volume are to be found numerous therapeutic suggestions and formulæ that we have only the space to mention.

Garretson's "System of Oral Surgery" will repay the careful perusal of all professional men. It will be a good and easy reference-book for physicians and dentists, and no better companion can be at the disposal of the student.

COMMERCIAL NEWS.

One of Reed & Carnrick's extensive factories at Goshen, N. Y., was destroyed by fire on the 10th inst. This factory was devoted wholly to the production of their Soluble Food and Lacto-Preparata and contained extensive and valuable machinery. They had considerable stock of these Foods at their New York office, and consequently there will be no delay in filling orders. The factory will be at once rebuilt three times the size of the one burned, with machinery correspondingly enlarged.—*Dietetic Gazette.*

Eclampsia of Infants and Children.

In eclampsia of infants and children, hysteria, paroxysms of epilepsy, and cases of extreme nervous prostration in women dependent upon severe mental strain, Peacock's Bromides is superior to anything that I have ever used.

T. H. von Kleeck, M.D.,
Philadelphia, Pa.

You can easily add to your popularity and usefulness by following the instructions given by the McArthur Hypophosphite Co. on page 2 of this issue.

Constipation.

Doctor, if you have "tried everything" for this obstinate and only unfortunately too common complaint, send to C. L. Topliff, P. O. Box 991, New York City, for a free sample of his Pavara Pills. We have found these pills successful where every other known means have failed. Use as directed, and, our word for it, you will have at last found a specific for this troublesome ailment.

Leucorrhœa.

℞ Kennedy's pinus Canadensis (white), . . . 1 ounce.
Listerine, ... ½ "
Aquæ, ... 6½ ounces.

M. Sig.: Inject twice a day. Keep the bowels regular by the use of Acid Mannate.

The Missouri Pacific Railway Co. Leased and Operated Lines, Hospital Department.

Kansas City, Mo., July 12, 1890.

The Ale and Beef Co., Dayton, Ohio:

Gentlemen:—Answering yours of 8th inst., will say that I have used the "Ale and Beef Peptonized" in both hospital and private practice and am much pleased with it. My house-surgeons (Drs. F. R. Smiley and Geo. F. Hamel) inform me that it agrees with the stomach in cases where food cannot be retained, and this agrees with my own experience. *I had one case of a delicate lady* with a *forming* pelvic *abscess*, which involved the ovary. There was a constant vomiting and retching. She retained the "Ale and Beef Peptonized." This after I had tried a number of things which had failed. She drank it steadily for a month, and it seemed to be, in her case, food, medicine, and stimulants, all in one. It is an excellent thing. Keep up the good quality of the preparation, and it will surely sell.

Very respectfully,
Willis P. King, M.D.,
Ass't. Chief Surgeon, Mo. P. Ry.

Rip Van Winkle.

After a long day's drive, do you know of any two things that are more in order than a good book and an easy chair? The former one always has more or less choice of, but when it comes to the chair the case is different; either what you want is too expensive, and therefore beyond the reach of the average purse, or if cheap "is also nasty," and usually little better than nothing.

Knowing this from personal experience, we would respectfully direct your attention to what is known as the "Rip Van Winkle Chair;" it is made by P. C. Lewis, of Catskill, N. Y., and, with all we can say of it, we do not feel equal to the task of doing it justice. Cheap, comfortable, cozy, and easily managed; simple in construction, with a minimum of machinery and a maximum of absolute ease. It is without doubt the best chair for the money to day before the profession. We have had more solid comfort out of the chair we purchased last spring than anything of the kind, regardless of price, we have ever invested in. The catalogue issued by the manufacturer of these chairs is unique in its way, and by mentioning this journal you can obtain one free of cost.

A Rare Opportunity.

For Sale.—A $4000 practice, in a thriving town of 3500, on Pennsylvania Railroad, near Pittsburgh, Pa. Opposition extremely weak. Will sell real estate and practice, or practice and personal property, at a sacrifice, and upon terms to suit anybody. This is a rare chance for a live man if taken soon. For particulars, address "D. O. J.," care Medical Bulletin, Philadelphia, Pa.

Index to Advertisements.

A classified Index of Advertisements appearing in the Medical Bulletin will be found on page 39 of the current issue.